A Lecture
ON
SOME POINTS IN THE DIAGNOSIS OF INSULAR SCLEROSIS.

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INSULAR or disseminated sclerosis is one of the most frequent chronic diseases of the spinal cord, yet there is probably none in the diagnosis of which errors are so frequently made. I shall show you to-day five patients who, I am disposed to think, are affected with this disease, but it must be admitted that there is only one of them which is a typical example, and we had better see him first. [This patient (A.)—under the care of Dr. Bastian,—who presented characteristic tremors on voluntary movement, loss of power in various limbs, exaggerated knee-jerks, nystagmus, slow and peculiar speech, pallor of both optic discs, besides bulbar symptoms, was then shown and the nature of the disease generally described.] Were this symptom-group usually present in the perfect form just seen there would be little reason for hesitation in diagnosing the affection, but this is very far from being the case. I believe that for one typical example like this there are very many indeed the symptoms of which are so widely divergent that the idea of insular sclerosis may easily fail to present itself to anyone familiar only with the classical form of the disease. Let me show you some examples which have recently come under my care in hospital.

Patient B., a man thirty-six years of age, married, was admitted on Aug. 14th, 1894, with complete loss of voluntary power in the lower and some weakness in the upper extremities. (I am indebted to Dr. Warrington, resident medical officer, for notes of this and the following cases.) It appears that thirteen years ago his right arm felt "numb" and he frequently dropped things from it, and gradually lost power so that he ceased to be able to hold anything. His right leg also became affected; he dragged it in walking and frequently fell. There seems to have been no objective sensory change. The face was not affected. In about six weeks he recovered and was able to go about his work as usual. Very soon after this his left eye "had a fog over it," and he attended at Moorfields Hospital. "It came all right in about nine weeks." Some years after this he had a similar attack in the eye and again recovered, but the sight never seemed quite so good. Three years and a half ago he could not use the left hand, which was weak, not stiff, and the left leg became affected; he found he could not walk well, and then the right leg also became affected. For two years past he has been unable to move his legs. The right hand has also been affected at times. For eighteen months he has had difficulty in holding his urine, not being able to retain it for more than an hour, and then it runs from him. He is conscious of its passage. Nor can he retain the evacuation of the bowel long after a call. (He has had accidents.) There is no history of syphilis and nothing material in the family history. His previous general health had been good, except for a little, not severe, rheumatism. He is a fairly well-nourished man, with a somewhat dusky face and heavy expression; mentally not very bright, but his memory not manifestly impaired, and he has not lost interest in his surroundings. There are no hallucinations. His speech is rather indistinct. There is no voluntary power in the lower extremities, which are kept extended except for frequent flexor spasms. There is slight rigidity of all joints, which is easily overcome. There is no wasting and no tremor; the muscular sense is good. On the left side he is quite unable to extend the arm, but if passively extended he can flex it to a right angle at the elbow. There is no movement at the shoulder-joint. There is slight flexion, but no extension at the elbow. He can flex his fingers, but there is no grasp; he cannot extend them. There is rigidity at all the joints, especially the shoulder; this can be overcome without causing pain. The thenar eminence and the first dorsal interosseous are wasted. There are no tremors. On the right side the voluntary movements of the arm are all fairly good, but vary very markedly, especially at the shoulder, which after repeated movements becomes rather feeble. The movements at the elbow, wrist, and fingers are fair, but here again they are weaker after each attempt—especially the extension of the wrist. There is slight rigidity at the shoulder, more than at the other joints. Wasting is seen in the first dorsal interosseous, but less marked than on the left side. There is no tremor, and the muscular sense is not impaired. The patient is unable to sit up in bed. On the sensory side the patient describes a feeling of numbness in all his limbs. Objectively, sensation to touch, pain, and temperature are normal in the legs and arms. The plantar reflex is active and equal on the two sides. The knee-jerks are very active and equal. There is no ankle-clonus. The wrist- and elbow-jerks are obtained on the right side, not on the left. The vision on the left side is $\frac{6}{12}$ and on the right side $\frac{6}{6}$. There is no nystagmus and no diplopia. The field of vision in the left eye is contracted on the nasal side. In the right eye it is normal. Mr. Gunn reports that the left optic disc is "on the pale side of normal." The pupils are equal, and react to light and accommodation. All the other cranial nerves are normal. The patient complains occasionally of frontal headache, but no tender spot has been elicited. There is no irregularity of the spine. All the other functions are normal. The faradaic and galvanic reaction of all the muscles of the arms and legs is normal. Tremor occurring on making an intentional movement and subsiding when this is discontinued is the symptom which, of all others, is considered the most characteristic of insular sclerosis, and I suppose that if it be present in a typical form it is almost conclusive evidence of the disease. Nystagmus, also, is a symptom of great importance, though its frequent occurrence in cerebellar disease, Friedreich's ataxy, and in chronic alcoholism must always be remembered. The laboured articulation observed in Patient A. is also useful for purposes of diagnosis, but in my experience it is not often present. For the moment I will content myself with calling your attention to the fact that in Patient B. there is no tremor on intentional movement, no nystagmus, no scanning articulation—and present to you Patient C.

Patient C., a man thirty years of age, a widower, was admitted on Sept. 17th, 1894, on account of partial paralysis of both lower extremities and of the right arm. Seven years ago the patient was in the out-patient department complaining of numbness in the body and legs. At that time there was no loss of power, and he was able to continue his work. He also complained of numbness and tingling in the tips of his fingers. These symptoms sometimes ceased for weeks together. In August, 1888, the numbness was better but the legs were weak and his gait was unsteady. In June, 1889, it was noted that the right knee-jerk was exaggerated and there was ankle-clonus. The left knee-jerk was obtained with difficulty. The patient gave up his work in July, 1889, owing to the weakness in the right leg. At that time there was "slight anæsthesia of the left hand and foot, especially in the fingers and toes." In January, 1890, he was admitted into hospital with weakness of the right arm and leg. In July of the same year there was more weakness and stiffness. In March, 1891, the symptoms noted were headache, nausea (no actual vomiting), drooping of the right angle of the mouth, and a spastic condition of the right leg. The left optic disc was noted as being pale. In October it was remarked that he was much worse and much upset by the death of his wife. A note made in February, 1894, in the out patient department shows that he had been slowly getting worse. It adds "There was no clonus. The knee-jerk was exaggerated. The patient cannot walk, but can move the right leg when seated in a chair." In March, 1894, he lost the use of the left leg completely in a day or two. Since then it has been getting stronger. The patient is a temperate man, and has been comfortably off. Previous to the time noted his health had been good, but he had been exposed to venereal disease and had suffered with a bubo at the age of twenty years. There had been no secondary symptoms. The patient's wife died three years ago. She had had no miscarriages. They had been married eight years and were childless. The patient's appearance is healthy, and he is well nourished. Mentally he is intelligent, and seems to be reliable. He is unable to stand. There is marked weakness of both legs, especially in the right. The

right leg cannot be lifted off the bed, the only voluntary power consisting in being able to flex the thigh and knee. The muscles of the leg are weaker than those of the thigh, especially the extensors. The foot is in the position of talipes equino-varus, and the toes can hardly be moved at all. There is marked rigidity at the thigh, knee, and ankle-joints. The left leg is also very weak, but shows more power than the right. The heel can be raised off the bed and other movements performed against very slight resistance. The thigh is stronger than the leg, and extension than flexion. Rigidity is present, but less so than in the right. The left upper extremity is strong. On the right side there is rigidity at the shoulder-, elbow-, and wrist-joints, so that the various parts are kept in a position of flexion. All the movements of the forearm are weak, but especially that of the extensor group. The grasp is feeble, flexion of the forearm on the arm weak, and the action of the triceps moderate. The arm cannot be abducted except feebly, nor can it be raised beyond the horizontal position. The trapezius, serratus, and latissimus dorsi appear to act well. Both knee-jerks are exaggerated; the right more than the left. There is ankle-clonus on each side; on the right more than on the left. The triceps and radius jerks are increased on the right side. The cremasteric and plantar reflexes are normal, and the abdominal and epigastric not obtained. On the sensory side no objective disorder is found. Subjectively the patient complains chiefly of a gnawing pain in the right lower limb, starting from the hip, which comes on chiefly at night. It is not of a shooting character. There is no feeling of numbness anywhere, no pins-and-needles, or tingling. There is occasional frontal headache—no vomiting or sickness. He takes a long time to pass his urine and has to strain, with a feeling that some is left behind. He is always conscious of the act; it never passes involuntarily. There is no trouble with the rectum. The pupils, which are equal, act normally. Ophthalmoscopic examination shows that the left disc is slightly paler than the right. In each eye vision equals $\frac{6}{9}$; Jaeger No. 3 at 12 inches. The fields are normal to rough estimation. For a few days, three years ago, he suffered from diplopia. There is none now. Note that in this case, again, there is no tremor, nystagmus, or affection of articulation. On the other hand, in both these cases a subjective sensation of numbness is described.

Patient D., a woman twenty-seven years of age, single, in domestic service, was admitted into hospital on Oct. 9th, 1894, with loss of power in the lower extremities. One day in May, 1893, without any previous warning, the patient noticed that her left leg dragged, and that she tired very soon. If she attempted to run she fell down. At the same time she found herself unable to lift things with the left arm. In spite of these symptoms she continued at her work, but was unable to walk any distance out of doors. The arm gradually recovered in the course of one month, but the leg has never got well, though the dragging has ceased. At the onset the left leg became numb: it felt to the patient like a log of wood; sometimes the whole leg tingled like "pins and needles." Since December, 1893, both legs have been weak, and often give way at the knees. After walking about 100 yards she is quite unable to move one foot in front of the other. After being ill for about three months she was treated by a medical man for "hysteria." Three months ago she noticed that she could not hold her water, the call was so rapid, nor could she check the evacuation of the bowels. A week ago she found that her sight was not good for doing fine work. There has never been any diplopia. Previous to the present illness her health had been always good, and had never been better than on the day when the weakness in the leg suddenly occurred. She had never suffered from influenza, and the catamenia had always been regular. There had, however, been a good deal of mental trouble at the time of her attack. She has always been comfortably off, has not suffered from exposure to weather, or sustained any injury by violence. The family history is excellent. At the present time the patient is a healthy-looking girl, well nourished, bright, and intelligent. There is no affection of speech. She can stand alone with her eyes open, but when these are closed she soon loses her balance, but shows no tendency to fall in any particular direction. She manages to walk alone, but is very unsteady and insecure. One leg is apt to stick in front of the other, and this nearly upsets her. She can cross one thigh over the other and raise herself from a sitting posture, but she cannot mount on a chair with either leg. In bed the movements of the lower limbs seem fairly well performed, without obvious difference on the two sides. The feet are not dropped and the extensors of the feet and toes are fairly strong. There is slight rigidity in the lower limbs. There are no tremors. The movements of the upper extremities are well performed; no tremors are observed in them, and no rigidity. She can raise a glass of water to her lips without shaking it. On the sensory side there is no objective disorder. She complains of numbness and a tingling sensation over the whole of both her lower limbs. There are no pains, or girdle sensation, or headache. There is very slight ptosis of the right eyelid, not observed on a later examination. The pupils are equal and react to light and accommodation. By a rough estimation with upheld fingers the field of vision is normal. The vision right and left is $\frac{6}{9}$; on the right side Jaeger No. 3 at ten inches; on the left side No. 1 at ten inches. There is distinct pallor of both discs, rather more marked on the right than the left, especially in the lower and temporal portion. There is nystagmus, of fine range, and rather slow in all directions, except downwards. It ceases when the eye is at rest. There is nothing notable in the other special senses, or in the thoracic and abdominal viscera, except that the heart shows a little irregularity of beat. There is no bruit, and there are no signs or history of cardiac failure. On Oct. 16th it is noted that there has been a great increase of weakness in the legs so that the patient is quite unable to stand, and cannot even raise her heels off the bed. In a few days this was recovered from, and she can now walk, though with difficulty. Again we find an absence of tremor on voluntary movement and of any peculiarity of articulation. But in this case there is nystagmus, which was absent in the two male patients.

Patient E., a woman thirty years of age, married, was admitted on Oct. 2nd, 1894, on account of loss of power in one upper and the opposite lower extremity. At the age of sixteen years the patient had an attack of headache and vomiting, and was in bed for a week. On recovering she noticed that at times attacks of powerlessness would come on in the right arm, so that things were dropped. These attacks recurred during a period of a few months, and then entirely ceased. She has never been able to write properly with that hand since then. Within the last few months she has noticed numbness occasionally in the right arm. About three years ago, when out walking, she had a sensation of "pins and needles" in the left foot, and the leg dragged a little. Soon after this weakness in the left lower extremity was observed, so that she had difficulty in going up and down stairs. In walking there was trouble in lifting the foot off the ground, and she often had to grasp objects for support. From that time the weakness has been gradually getting worse, especially after a confinement, but she has never been unable to stand. Since the onset she has often been troubled with numbness in the calf and occasional "pins and needles." There has never been any weakness in the right leg, and never any trouble with the bladder or rectum. The patient since eight years of age has been subject to headache, especially at the back of the left eye, and, according to her account, accompanied with dropping of the eyelid. For the last four years, since marriage, she has sometimes a tearing kind of headache at the back of the head, and a feeling on the vertex as though she had been struck by a hammer. There is no reason to suspect that she has had syphilis, and there is no family history of any nervous disorder. The patient is a fairly healthy looking woman, rather thin. She can only stand alone with difficulty and for a short time; she usually falls to the left. When walking she has to grasp objects to prevent her from falling. The left leg is dragged and the toes scraped; the heel does not touch the ground until nearly the end of the step. There is a tendency to turn the sole of the foot inwards. As the patient lies in bed her left foot is rigidly in the position of talipes equino-varus; the big toe is hyper-extended and the power of flexing it is weak. All the movements of this limb are retained, but in much weaker form than on the right side. When sitting on a chair the patient cannot lift the left thigh over the right, or get up on to the chair by the left leg, or dorsiflex the left foot. She can raise herself to the standing position easily. The grasp on the right side is distinctly weaker than that of the left. Flexion and extension of the forearm and the movements of the wrist are also weaker. No difference is observed in the power of the deltoid, latissimus, or pectorals. The knee-jerks are brisk, especially the left. There is distinct ankle-clonus on the left side and a tendency to it on the right. The plantar reflexes are present. No

tremor is noticed in any extremity when at rest. No incoördination is to be observed when she attempts to approximate the index fingers or to touch the nose, or in raising a glass of water to the lips. An attempt to write results in the production of a perfectly unintelligible scrawl, the hand being at once seized with quick, small, rhythmical tremor; but when the right hand is supported by the left a legible though feeble signature is accomplished. On the sensory side nothing objective or subjective is to be noted. The functions of the rectum and bladder are normal; there is nystagmus; the special senses are apparently intact. On rough examination the field of vision is normal. There was nothing of importance in the viscera.

If we reflect for a moment on the endless variety of position occupied by the islets of sclerosis in this disease it appears remarkable that anything like a type can be found, and we can feel little difficulty in believing it as at least possible that cases like the last four, which present but few symptoms belonging to the classical form, may yet be examples of the disease. Let me call your attention especially to the last case, because it presents a feature which, in my experience, is perhaps one of the most characteristic of all in this disease, although comparatively little stress has been laid upon it by writers. I refer to the interval which elapsed between this patient's first symptoms at sixteen years of age and the affection of the left leg when she was twenty-seven years. I do not think that there is any disease of the spinal cord, except insular sclerosis, in which you will find this kind of recurrence of loss of power in the same or another limb after one or more intervals of partial or complete recovery. Note what happened in the other cases. Patient A. two years ago felt a sudden weakness in the left leg and fell down. A feeling of weakness would occasionally be experienced after a long walk; but beyond this he was not inconvenienced for eight months, when weakness of the right leg and arm set in. Patient B. lost power in the right arm and leg, but recovered in six weeks and was able to go about his work as usual, and it was not till nine years later that his left limbs became affected. It was a year or more between Patient C.'s attack of numbness and his loss of power in the legs, and in the meantime he had been constantly at work. Patient D. lost power in her arm, but recovered it in the course of a month and resumed her work. The leg, which was affected at the same time, never completely recovered, although it became so much better that she hardly noticed any difficulty. Seven months after the first attack the other leg lost power. I will content myself with referring to this point in connexion with the five patients before us; but examples could be multiplied to a remarkable extent; indeed, if I am not mistaken, it is quite exceptional to meet with a case of insular sclerosis in which there is not a history of one or more often long-continued remissions.

Looking back I can remember a number of cases in which this recovery from more or less powerlessness for a time, to be followed by a return of trouble in the same or another limb, led me into temporary error of diagnosis, until the sequel, by displaying typical symptoms of insular sclerosis, cleared up the obscurity. When the remissions occurred in young females I used to fancy that the term "hysteria" could be satisfactorily applied to the case, whilst, if the patient belonged to the other sex, not a little suspicion of malingering would sometimes cross my mind. Subsequent experience, extending over many years, has pretty well convinced me that the view still widely held that a shifting of loss of power from one limb to another is characteristic of hysteria is an error which has arisen from cases of insular sclerosis being diagnosed as hysteria. As I said before, I do not think that there is any other disease of the spinal cord in which this feature is to be found, at least in the special circumstances by which it is marked in these cases. I am not forgetting that recurrence of symptoms, either in the same or another part, is very frequent indeed in syphilitic disease of the nervous system, and that in such instances there may be a more or less prolonged interval of exemption. It is necessary, of course, to bear this in mind, and in some cases there may be a certain amount of difficulty in the diagnosis.

There is not time on the present occasion to discuss fully our means of differentiating the two conditions. It must suffice to say that in very many instances of insular sclerosis (occurring, as the disease so frequently does, in young females of good social position) syphilis can be easily excluded, that in the latter disease more or less complete paralysis rather than paresis is the rule, and that the effects of the remedies afford very great help, the power returning in insular sclerosis independently of any active treatment, whilst in syphilis the paralysis tends to become more and more confirmed until specific remedies are employed, when it usually begins very shortly to show marked amelioration.

I am disposed to think the condition of vision likely to afford much help in the diagnosis. Last year I adduced evidence[1] to show that some degree of optic atrophy was present in the course of forty-three out of a collection of 100 cases of insular (disseminated) sclerosis, and it was remarked besides that even when the discs presented no change some transitory amblyopia was to be found in a considerable number of cases of the disease. You will have observed that out of the five patients whom I have shown you no less than four are affected with amblyopia and present more or less pallor in one or both discs. It is especially to be noted that the amblyopia is very liable to remissions and recurrences in this disease, exactly recalling the peculiar feature already alluded to in reference to loss of power in the limbs. It would not be right to speak very positively on these points pending the opportunity of still more extensive observation; but I am certainly disposed to believe that the occurrence of paresis in one or more limbs, with spontaneous recovery, and recurrence of symptoms in the same or another part, together with amblyopia, accompanied or not by pallor of one or both discs, constitute a symptom-group which should hold a place in the diagnosis of insular sclerosis not second to that at present occupied by tremor on voluntary movement and scanning articulation.

An Address
ON
EXPERIMENTAL CRANIOTOMY AND DIAGNOSIS OF CEREBRAL ABSCESS.

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(Continued from page 12.)

ABSCESS of the brain, which when clinically considered seems to be an essentially unique morbid process, resolves itself into two varieties which differ utterly in diagnosis—viz., acute abscess and chronic abscess. Writers aiming at the unity of the process lose sight of the clinical side and do not bring into sufficient relief the practical differences which exist between the two varieties. What they say of the abscess applies chiefly to the acute form. Bacterial analysis might throw more light on the causes of the differences which are developed in the process of suppurative inflammation of the brain. At present, what we chiefly know is the intensity of the exciting causes; the duration of the process depends much on these. If a considerable cerebral artery is closed by an embolus; if a wound on the head causes disturbance, contusion, or hæmorrhage in a zone of the brain; if a suppurative otitis media violently affects the bony substance and gives rise to a thrombus in the cranial sinuses, or excites inflammation in the adjacent meninges—the nutritive process of the cerebal tissues near cannot avoid deterioration, the pyogenic agents find a field well prepared, and their devastations are in consequence very rapid. But here, besides the rapidity of the disease, there arises another clinical distinction. These occurrences, being more intense, cannot easily happen without being perceived by both the patient and his medical attendant. Moreover, the succession of phenomena aroused by them is not so disconnected as to lose the evidence of their reciprocal relation and the unity of the process they reveal. Finally, even the reaction of the brain provoked by rapid and great intracranial changes is more evident and appreciable to the practitioner. If to all this we add that the rapid diffusion of suppuration causes fever, and even a special fever,

[1] Atrophy of the Optic Nerve as a Symptom of Chronic Disease of the Central Nervous System. Brit. Med. Jour., Oct. 7th, 1893.

as a phenomenon revealing the nature of the morbid process, then it is easy to comprehend how the clinical idea assumes a form so distinct that the diagnosis of acute abscess naturally follows.

When we come to the chronic forms of cerebral abscess the description and opinions of pathologists, inspired by the observation of such facts, no longer correspond to the facts themselves. In these the exciting causes are less intense or less apparent. It is one thing, for example, if an embolus from a pulmonary vein closes the artery of Sylvius, and another if pus penetrates unperceived into the brain by one of those narrow ways which lead there from without. The slightness of the latter is not only marked by the absence of disorders perceptible to the medical man and patient, but it also causes a slower succession of changes around itself; the surrounding tissues, not previously affected and less violently attacked, have time to organise themselves for the defence, and in time circumscribe with a solid barrier (pseudo-membrane) the hostile element (pus) which tends to destroy it. This mysterious faculty which the brain possesses of adapting itself to the most serious lesions as long as they are gradual has full opportunity to act completely. Thus it follows that from ignoring or forgetting the primary cause it seems as though no external cause exists; and here we have the idiopathic abscess, which is almost always chronic. Even where the primary cause is known, if it be not violent the process which succeeds follows with less rapidity, and hence the slight changes of the brain may not arouse perceptible functional disorders. Here we have the latent abscess or the latent period of the chronic abscess. The slowness with which brain alterations proceed proves that a length of time is required for their development, and here we see the abscess become chronic. The perception of these internal processes is often defective, as is frequently seen in the doctrinal works of pathologists and in the reasoning of clinical physicians, who write and think of cerebral abscess as though it existed only in the acute form. But the abscess exists also in the chronic, idiopathic, latent, or semi-latent form, and this, though less frequent than the acute, is by no means as rare as statistics would make us believe.

Acute abscesses caused by a wound or by suppurative otitis abound in the practice of the surgeon and the aural surgeon, and are less frequent in that of the general practitioner than the chronic abscess, which is, perhaps, the reason why this figures so seldom in surgical or aural statistics. This is as yet mere conjecture, but time will decide whether future statistics will prove it. Some clinical observations will, perhaps, serve better than pathological ones to show the most frequent difficulties encountered in the diagnosis of chronic abscess of the brain.

In June, 1892, a man thirty-two years of age entered the clinic. The only event in his life needing mention was a large scald in the arm occurring when he was four years of age. After this he had no other ailment except a lobar pneumonia at the age of twenty-six, and then enjoyed perfect health until 1891, at which date he fell from a height of about twenty-four feet, without, however, hitting his head; he fell on his feet and left side. This accident did not cause insensibility, but it produced a sensation of faintness, which some hours later was succeeded by another phenomenon—viz., certain clonic and rhythmic movements which lasted about two minutes without at all disturbing his consciousness. The phenomenon was repeated four or five times during the day, and was observable even in sleep, which was not disturbed by it. It has never ceased from this time. The patient has been unable to return to his usual work. It was only in the succeeding February that he was attacked by headache, especially in the neighbourhood of the right ear and forehead. He had, whilst perspiring, been exposed to intense cold. The pain was so violent that he was for several days confined to his bed. His medical attendant first ordered cold compresses and afterwards applied leeches to the head. Just as these remedies seemed to be succeeding he was again taken with convulsions, which for the first time caused him to fall and lose his senses. The attack was brief, but it left traces behind it; a most intense headache set in, which lasted a full month. The sight remained permanently dimmed. This attack was not repeated till May, and then another phenomenon ensued—i.e., diminution of power in the right arm. This, however, was not permanent. These two more serious crises, with loss of consciousness, were not preceded by aura, or accompanied by cries, foaming at the mouth, or biting of the tongue; nor were they renewed. Only during May a new disturbance presented itself, returning every day till June 6th. It was an intense tremor, which began in the right arm and then spread over the whole body, lasting about ten minutes. On entering the clinic the patient complained especially of pain about the right ear and forehead, and of a mucous discharge from the nose. He was a man of finely proportioned frame and was well nourished, and his muscles were fully developed. The objective examination revealed no anomaly in the nervous system. The voluntary movements; the reflex actions, both superficial and deep; sensibility to touch, to pain, to heat and cold, and to electricity; and the psychic functions—were all natural. Only the organs of sense presented any anomaly. Researches into the discharge from the nose showed an atrophic rhinitis. The right ear distinguished sounds at a less distance than the left, and yet the ticking of a watch was perfectly transmitted by the bones of the face and cranium. The direct examination by Dr. Secchi led to the diagnosis of salpingo-tympanitis in the right ear. An ophthalmoscopic examination revealed the presence of a serious bilateral inflammation of the nerves of the retina with hæmorrhages. The patient suffered occasionally from a momentary clouding of consciousness (*absence épileptique*) which lasted for ten or fifteen seconds, and left behind it a confused memory of discomfort and increased headache. He spoke of giddiness and said that if he had been standing up he should have fallen; but this access always chanced when he was seated or lying in bed. The patient walked well and ate, digested, and slept like a person in health; neither pulse nor respiration offered the least sign of alteration, though observations were prolonged through fifty days. His temperature was always below normal. On the morning of June 2nd he went to the watercloset. Finding he did not return the attendant entered and found him with his head falling and his arms supine; his breathing had developed the Cheyne-Stokes rhythm, and a greenish liquid was oozing from his nose and mouth. He remained in a state of coma till his death at 2 P.M. Opening of the skull revealed the ordinary lesions dependent on increased intracranial tension; the convolutions were pressed together, the fissures being almost invisible; and there were numerous bloody stains on the meninges, which were softened in all the zones. The sinuses and veins were turgid, but without sanguineous congulations. In the middle fossa of the skull, to the right, the dura mater was thickened and covered with pus and reddish-grey granulations; it was, however, easily removable from the osseous tissue, and its under surface had a normal aspect. In the right temporal lobe there was a purulent abscess which rested on part of the diseased dura mater; this, indeed, formed the inferior wall of the cavity of the abscess, which was as large as a walnut and limited by a false-membrane of great resistance. The cerebral tissue surrounding the abscess presented a white, softened aspect. This softened tissue reached the interior of the optic thalamus and extended behind as far as the occipital lobe. The ventricles were over-full of fluid and the cerebral substance was œdematous. There was nothing remarkable in the rest of the cranium, there was no trace of (previous?) fracture in the bones of the base, and no necrosis. The temporal bone, which was especially examinined, was in a normal condition. Thus, the post-mortem examination confirmed the clinical judgment, which had been that of cerebral abscess; but we must allow that this correspondence of the clinical hypothesis and the pathological fact could not even now be proved by valid arguments. The symptoms already referred to prove that there was a morbid process going on in the brain, but did not demonstrate an abscess. No wound had directly injured the head, which had received no external lesion. Admitting that we must believe in an internal lesion (due to laceration, hæmorrhage, or otherwise), why may we not have believed that this proceeded from a tumour rather than from an abscess? External lesions being absent, where are we to look for the cause of suppuration? Would not the constant absence of fever, too, point to the diagnosis of tumour? And would not the ever-progressive coarse of the disease still more favour it? I leaned to the theory of abscess because there were no phenomena of infection, nor was there paralysis of the cranial nerves, but I confess that the argument was more lucky than sound. Therefore I recommend my pupils to doubt—doubt much and doubt often—because my own arguments in favour of abscess were very uncertain. Indeed, I have myself seen many intracranial tumours which, like this abscess, existed without phenomena of infection and unattended by paralysis of the cerebral nerves.

Even in cases where the diagnosis is fortunate the physician

who declines to affirm more than reason concedes must often stop at a diagnosis of greater or less probability, because he finds conjoined some phenomena which indicate one thing and others that assert the contrary. I always inculcate on my students this forced resignation; but the difficult labour of prudence, diffidence, and circumspection which is learned in the schools is quickly frustrated by the reading of books that are deservedly held in great esteem. Even a most prudent master, such as Leube, more studious of the difficulties of diagnosis than any other, continues to teach[1] that the diagnosis of subacute or chronic cerebral abscess is, on the whole, easy, and he gives as the most important indication of abscess intermittent fever associated with rigors, and he also attributes greater value to the absence of the optic neuritis and etiological considerations. In this way we should diagnose a tumour, because there is no fever and the congestion of the papillæ is evident. Certainly I should not merit blame, as I deserve no praise, for giving greater weight to opposing arguments; but, to be sincere, we must own that mistakes may be made in both ways.

Not being able to allow that an injury without external lesion generates a cerebral abscess, especially as the injury (in the case above quoted) was not on the head, the anatomical section favoured the following interpretation. Falling on his feet from a great height, the patient received a cerebral contusion in the region of the temporal lobe. To this may be attributed as indirect phenomena the muscular contractions which succeeded the fall. In fact, the circumstance that suppuration had extended to the meninges confirmed this idea, although it is known that chronic abscesses of the brain, when not caused by wounds, are almost always deep and covered with a stratum of nervous substance which divides them from the meninges. Körner has demonstrated that in abscesses due to caries the stratum of the brain which divides the pus from the solid matter is very thin and altered in structure; in this patient, however, there was absolutely no trace of caries of the bone. Nor could the stimulus to suppuration have been from the injury, without external lesion; this stimulus, which changed a cerebral contusion into a chronic abscess, possibly came from acute otitis which had not suppurated. At first sight this hypothesis seems to be an unlikely one, but if we reflect that excellent conditions exist in the ear for the generation of pus, and that the channels of communication between the ear and the brain are many and easy, it is not impossible to comprehend how a suppressed otitis might emit germs which enter the brain and generate a suppurating process. Œdema due to the abscess, acute venous stasis under the strain of evacuation, or perhaps some convulsive attack caused sudden death by the rapid increase of cerebro-spinal fluid and by the great venous stasis and bleeding of the meninges which followed. Such a genesis is so rare that probably my interpretation will seem to many to be not well demonstrated. But I have chosen precisely this case in order to prove how obscure the etiology of abscess on the brain can be even where the common indications of the causes are not absent. It is clear that in a path so obscure it is easy to err in our interpretation; yet the clinical physician is obliged to anticipate, although unprovided with the knowledge which necroscopy furnishes.

I do not say that we can never predict the succession of events which give rise to some of those cerebral abscesses not caused by wounds; indeed, I should like to submit a case in point, which is admirable for its clearness of interpretation. The diagnosis could be made with perfect security. The case was one of a young peasant from Imola aged twenty-one years. He entered the surgical clinic at Bologna on Aug. 17th for an empyema on the left side. He was treated by aspiration and washing out of the pleura. This youth had never presented symptoms of injury to the cerebral functions when on Aug. 25th he was suddenly seized with vertigo and loss of consciousness and fell. He was standing at the time. He did not recover consciousness for half an hour. After another half-hour the attack was renewed, accompanied by convulsions in the upper limbs. Three hours later a third attack supervened, and he remained insensible till the following day. During the succeeding days all seemed to return to its normal state, but on Aug. 30th he was again attacked by convulsions, no more diffused, but limited to the head and right arm. Another attack, yet more serious, seized him the day after; all the right side of the body was shaken by tonic and clonic contractions, the mouth was filled with froth, and consciousness was again entirely lost. This also passed off, and it was observed that the lower part of the face and the right limbs were paretic. The attack was renewed in the evening of the same day. His speech began to alter on Sept. 2nd and by the evening of the 5th he could no longer articulate, though the epileptoid convulsions did not return. He had at first a slight irregular fever, but this afterwards ceased. From his entry into the clinic on Sept. 14th till the time of his death on Nov. 10th his temperature varied very slightly above or below normal. It would be useless at present to refer to the data obtained by examination of the thorax. I will only remark that, besides the pleurisy, the organs of the chest and abdomen afforded nothing worthy of note. The nervous system presented paralysis of the jaw and absolute paralysis in the upper limbs and incomplete paralysis in the right leg. The passive movements of the arms were limited by a certain resistance of the muscles; whereas the lower limbs were lax, and even voluntary movement of the leg from the thigh and foot from the leg was possible, though weak. Muscular power was diminished also in the left arm. All the reflexes were normal; but those of the periosteum were deficient, as they only existed in the right ulna. Also the different forms of sensibility were perfect, except the muscular sense on the right side, where the patient could not distinguish weights which were quite perceptible to him on the left. The sense of the position of his fingers was also a little obtuse on the right. The special senses were normal. In the course of October, however, the sense of pain was less acute on the right than on the left side; at a later period, on the contrary, it became more acute. There was distinct aphasia. The patient could pronounce some words, but with difficulty. The tongue deviated to the right. He had no convulsive attack till Nov. 1st, when he had one without losing consciousness. It lasted ten minutes, during which all the muscles of the right half of the body displayed clonic jerks. Headache and vomiting followed during the succeeding days. On Nov. 10th, becoming weaker by degrees, the patient had two attacks of insensibility without convulsions. These were followed by a period of comparative lucidity; but in the evening intermittent tetanic spasms seized him, which lasted till 3.30 A.M. of the 11th, when he died. On that day no movement was evident except a certain degree of contraction in the toes. The ultimate loss of consciousness took place four hours previous to his decease. The pulse and respiration presented nothing remarkable, nor did the urine. Not till the evening of Nov. 10th did the temperature rise for the first time in a marked degree, so much so that at the time of death it reached 42·7° C. (108·8° F.). On the cranium being opened the sinuses and meninges showed nothing striking. The left frontal lobe appeared to be more prominent and rounded than the right, and a sense of fluctuation was observable in the elevation of the first and second frontal convolutions on the left. On introducing a syringe into the second convolution there issued about 50 grammes of purulent matter, greenish, dense, and fetid. A transverse section of the brain showed that the cavity of the abscess reached nearly a centimetre above the roof of the left lateral ventricle. This cavity was roofed in by the subcortical layer, and downwards gradually enlarged to almost a centimetre above the level of the corpus callosum. It began in the anterior portion of the frontal lobe and extended through the centrum ovale to beneath the convolutions of the motor area; the shape was that of an ellipse, of which the greatest diameter parallel to the median fissure was 7 cm. long, the smallest diameter being 3 cm. Its greatest depth was in front; the cerebral substance was softened at the back. The parietes of the abscess were formed by a thin stratum of rosy colour, of greater consistence than the white substance, and covered with a greenish-yellow membrane. This membrane was detachable and was of the capacity of a large hen's-egg. There was nothing in the rest of the brain except three or four branching grooves of a vivid red colour in the caudal nucleus on the left, caused by the congested bloodvessels. Senator[2] and Drummond[3] have made similar observations; but the commencements of the cerebral phenomena were not in their cases as marked and serious as in my patient. In this case the sudden, complete, and prolonged loss of consciousness, followed on the same day by unilateral epileptoid attacks, showed that from one moment to another the conditions of

[1] Specielle Diagnose der inneren Krankheiten, Band ii., p. 225. Leipzig, 1893.

[2] Berliner Klinische Wochenschrift, 1879. No. 4 et seq.

[3] THE LANCET, July 2nd, 1887.

the brain were changing, and this could not happen except through disturbance of the circle of Willis. Now in the case of an empyema one is perforce led to the supposition of an embolus of the left Sylvian artery, because the absence of all paralysis at first and the return of convulsions on one side in a young man aged twenty-one, whose heart and blood-vessels are healthy, peremptorily exclude suspicion of hæmorrhage and thrombus. In the cases of Senator and Drummond, the commencement of the disease being more gradual, the elimination of the hypothesis of a tumour was less absolute than in mine, where the reason for the elimination was evident. The following symptoms served to demonstrate that we were not treating of a mechanical embolus, but of an infective one. The collateral blood-supply must have sufficiently nourished the organ, because the patient passed four days without convulsions, paralysis, or injury to the senses. Consequently the symptoms which supervened showed that there was being developed in the same cerebral region, from the first violently injured by disturbance in the circle, an irritative and destructive process. This must have been excited by some agent from the embolus which, detached from a pulmonary vein, had lodged itself in an artery of the brain. No possible objection could be made to the logic of this physiological interpretation of the morbid phenomena, and hence the clinical diagnosis was quite exact. But how rare this desirable evidence of facts is in practice. More often the chronic abscess remains unsuspected, or we may suspect without being able to prove it; or else an abscess is believed to be where none exists. Every clinic could give proof of this assertion. Here, however, are the proofs which I have to give. I will begin with the history of a case which I observed in 1879, and which I left with the undecided diagnosis of "cerebral tumour or abscess," so old are my opinions on the subject.

The patient was a foundling five years of age. His short life as given by the nurse contains the important fact that between his sixth and eighth month he had five attacks of eclampsia. He suffered from rickets, and developed slowly; but later he appeared to be healthy and intelligent, although he had in the right leg a sinus which had opened two years before he entered the clinic. Besides this, a cicatrix was found in correspondence with the right parietal protuberance, which two years before had been in a state of suppuration. This wound on the head assumed some importance from the fact that the little patient, after being well for three years, once more had convulsions. During their occurrence the boy preserved consciousness and complained of pain and weakness in the left limbs. The attacks were only repeated a few times and then ceased. But not long after he began to suffer from a constant and severe headache; then, in February, 1879 he had fits of sickness, hesitated in his speech, and showed a deviation in the angles of his mouth, accompanied by a flow of saliva. At this juncture he was brought to the clinic. He had scarcely entered when he had a convulsive fit, which I find thus described in the history of the case: "All the muscles of the right side showed clonic contractions, especially the flexors of the limbs; the head was turned to the right, the eyelids half closed, eyes fixed and immovable; pupils dilated and not sensitive to light; pulse 120, respiration 40 to the minute. There was complete insensibility, and no impression could be made on the sensory nerves or special senses. This state of things lasted ten minutes, when the contractions became weaker and ceased; the breathing calmed down, and consciousness began to return. Then the same contractions returned, lasting the same time as at first, but on the left side instead of the right. This ceased and began again on the right. This alternation of convulsions continued for four hours, after which the child became quiet and slept profoundly. The next day, Feb. 9th a slight paresis of the left side was observed. There were bilateral mydriasis of the pupils and internal strabismus in the left eye. Sensibility was normal and intelligence tolerably preserved. There was nothing remarkable in the physical signs of the organs of the thorax and abdomen. The patient had no headache, but he had fever, which proved to be intermittent, with a minimum of 36° C. (96·9° F.) and a maximum of 39·2° C. (102·6° F.), though it was not often so high." Things went on thus till Feb. 23rd. Then an increased tendency to sleep was noticed. On the 27th another convulsive attack ensued, lasting twenty minutes. It is described in the notes as follows: "First of all the cheek flushed very red, then the breath became slower and deeper, the left arm became rigid in flexion, the right arm was affected, but the hand was still flexible. This lasted more than two minutes, and then clonic contractions began in the left leg, which afterwards extended to the arms and diaphragm. The eyes were fixed; the pupils at first were dilated, later narrowed, and were insensible to light; there was complete unconsciousness." On touching the left limbs one perceived a slight tremor in the tendons. At length only a tremor in the left arm remained, and then complete stupor set in. In this state the temperature of the left temple was 32° C. (90° F.) that of the right being 33° C. (92° F.). The next day extreme and painful irritability of the whole body was noticed, especially on the right side. It was enough to touch the child ever so slightly, and he complained in spite of a partial state of consciousness; indeed, this lapse of sensibility constantly increased till death ensued on the morning of March 4th. All the functions of the nervous system were diminished, but on the eve of death a convulsion of less intensity took place. The respiration maintained its regularity to the last at 18 to 20 the minute. The pulse during the whole period of our observations varied between 120 and 140, except during the last hours, when it became less frequent. The temperature, which had been that of intermittent fever, gradually fell on Feb. 26th to 35·5° C. (95·5° F.), on Feb. 28th to 34·8° C., on March 1st to 34·5° C., on March 2nd to 32° C., and on March 4th to 25·3° C. (78° F.). The urine was normal throughout. It is not known whether the child had ever suffered from a wound on the head, but it is certain that he had a suppurative process in the parietal region, and, his being a boy and a foundling, we may reasonably suppose the origin of this suppuration to have been a fall or an unperceived blow not revealed to the physician. As, moreover, an intracranial process, especially a cerebral one and of the left hemisphere, cannot be doubted, the hypothesis immediately arises of an abscess in the brain caused by a wound. What arguments can be opposed to this judgment? As far as I see, only this—that the chronic process in the left half of the brain might be a tumour. Usually a collection of encapsuled pus of old date, has less expansive power than a neoplasm, hence the compression, which is resented by the tissue of the brain, is less in the abscess than in the neoplasm. It is equally true that usually cerebral abscess is found in the temporal lobe or in the cerebellum, and hence the indications of injured or diminished functions in the corresponding cerebral zone are either less distinct or absent altogether, for the functions of these two zones of the skull are little perceptible, if at all. These differences in the pathological process ought to bring some diversity into the symptoms provoked by them, for it is not the inner nature of the pathological process, but the physical qualities of its products and their seat which constitute their condition and most influence the genesis of the symptoms. An organ so wonderfully intricate and mysterious as the brain might be compared to a keyboard. Every key ought to produce a particular sound, and no other, whether it is pressed on by an abscess or a neoplasm. Hence the sound produced by one or the other may be—and, in fact, is—precisely the same.

Pathology certainly shows that the mechanical process of chronic abscess is frequently so slow and often so partial as to give no special phenomena. Hence there must always be a certain generic difference between the effects of one process and those of the other. But (excuse me if I insist too much on this point) when we come to facts, of what value are general principles? When a chronic abscess assumes great expansive force, and lies outside the temporal lobe and the cerebellum, where do we find arguments to distinguish it from a tumour? And when a tumour has a weak power of expansion or of compression, and is situated in the cerebellum or the temporal lobe, what reason have we to distinguish it from the commonest chronic abscess? The error is almost fatal. It is true that etiology sometimes assists us, for an injury on the head may favour the development of an intracranial neoplasm; we might find otorrhœa in one who has only tubercles in the brain, but a bronchiectasis or an empyema excludes the idea that a glioma or sarcoma is being developed within the cranium. Jansen has seen a patient who suffered from otitis with a chronic cerebral abscess, but this was not caused by the otitis, but by lesions in the thorax. Hitzig saw a man twenty-nine years of age who for sixteen years had suffered from otorrhœa, and had besides received a severe blow on the head, both being causes of abscess. Yet the patient had a cerebral tumour.[4]

There is only one phenomenon of abscess on the brain

[4] Berliner Klinische Wochenschrift, 1892, p. 713.

which we know to be connected with the nature of that morbid process and does not belong to the neoplasm—viz., fever; but those err who affirm that this symptom of cerebral abscess is very frequent or constant, and this I will prove. I now wish to note the inverse facts, which consist of the existence of fever without the abscess. It happened thus in the little boy of whose case I have still to give the anatomical results. He had an intermittent pyrexia, which was an argument in favour of abscess and not of tumour. Instead, this is what we found: considerable internal hydrocephalus and abundant gelatinous exudation over the cerebellum, the pons, and the chiasm of the optic nerves. In the Sylvian fissures, along the vessels, were several minute grey granules (tubercles). The right hemisphere of the brain seemed to be larger and more consistent than the left. Incision revealed a neoplasm the size of a pigeon's egg, spherical in form, yellowish in colour, fibrous, and of homogeneous aspect. It was situated beneath, outside, and rather behind the optic thalamus, precisely over the inferior horn of the right ventricle, which, from the pressure of the tumour, was reduced in the centre to a mere narrow canal. The histological examination demonstrated that it was a sarcoma. There was nothing remarkable in the rest of the body except the mesenteric glands, which were swollen, hard, and yellow. A very few yellowish nodules were found in the right lung. It was then easy to reconstruct the facts. All the old phenomena and many recent ones depended on the sarcoma; but the principal indications (such as peripheral paralysis of the cranial nerves, slackening of the pulse, and coexistence of tubercles in other parts of the body) being absent, it was impossible to foresee its existence, because vomiting, headache, and coma seemed to be nothing more than an increase of the preceding disease, while fever could only be connected with the pre-existing endocranial process, and, therefore, the diagnosis would point towards abscess and against tumour.

In the same year (1879) there also entered the clinic a lad aged fourteen years. His father had died from tuberculosis; his mother still lived, but she had lost three children in infancy, and only this one remained. Her health was not good; for some years a feverishness, cough, and sanguineous expectoration had given cause to fear that she suffered from the same disease from which her husband died. At four years of age the boy had suffered from typhoid fever, to which was added a purulent discharge from one ear. This discharge was not continuous, but had with intervals lasted till his sixth year. Since then it had never returned, so that his mother had forgotten on which side it was. Excepting this, the patient had never had any other illness beyond a few headaches and bleeding at the nose which from time to time troubled him, especially of late. Fifteen days before he came to us the headache was renewed, and this time, besides being more intense, it did not cease as at other times; in fact, it increased in violence and was accompanied with sickness, intolerance of light, and noises in the ears. It was the first time that need was felt of medical aid, but the treatment which was advised did not prevent the boy from constantly growing worse. The least noise worried him; the headache, sickness, vertigo, and obstinate constipation made such an impression on the mother that she decided to place her son in a hospital. We found him to be a weak-looking lad, with ill-developed bones and muscles, and with every sign of anæmia. He had a suffering aspect and strained eyes. Inspection and sounding and tapping on the skull revealed nothing, nor did the examination of the external organs of hearing. The abdomen was retracted, and the trapezius, sterno-mastoid and pectoral muscles had a slight tonic contraction. Pain was felt on pressure of the back of the neck. The tongue deviated slightly to the right. The phenomenon of the *tache méningitique* was clearly perceived; there was nothing else abnormal in the nervous system. The physical examination brought to light the existence of a pulmonary consolidation in both apices, but without augmentation of bronchial secretions. The patient entered the clinic on Nov. 6th. In the subsequent days it was noted that the boy, although intelligent and possessed of memory and speech, was apathetic, could not sleep, and was troubled by light or the slightest noise. The sickness and contractions of the same muscles continued. Ophthalmic examination revealed a slight double neuro-retinitis. All the cutaneous surfaces became hyperæsthetic and were covered by transient red marks. Although well covered, the patient was very cold. The apathy increased, and by Nov. 9th he passed his evacuations in bed without calling the nurse. All the flexor muscles of the limbs were a little contracted; the right pupil was less sensitive to light than the left; and the lower part of the face showed less power of movement. The pulse, respiration, and temperature had been normal till now, but on the evening of the 10th the temperature was 38·6° C. (100·50° F.), the pulse 120, and the respiration 30. A falling of the left upper eyelid was also observed. During the following days the patient emitted a continuous moaning cry. The outward movements of the right eyeball were very limited. The head was rigidly retracted. The breathing was irregular, and the temperature then rose above 40° C. (104° F.), but even this was irregular. The pulse, on the contrary, remained regular to the last. Thus, growing worse without any other noticeable symptoms, the patient died on the morning of Nov. 4th. He was the only surviving son of a father who had died from tuberculosis and a mother probably phthisical, and it appears that, with the apices of the lungs consolidated, he must have died from tuberculous meningitis. The paralysis of the facial and of the right abductor branch of the motor oculi nerve and of the hypoglossus, though not intense, pointed to a basal process. The headache, final fever, irregular breathing, and continuous moan, the falling in of the abdomen, the meningitic *tache*, and the rigidity and pain in the nape of the neck—would have all aided the physician if he had chosen to make a diagnosis of tuberculous meningitis; instead of which no tubercles were found even in the lungs, which only showed a chronic process of interstitial fibrosis, especially on the right. On opening the skull the dura mater was found to be swollen and opaque everywhere, and all the meninges were much congested. On the base of the cranium was a gelatinous yellowish exudation of recent date, with no trace of tubercles in any part. All the ventricles were much dilated. Pus was seen issuing from the Sylvian fissure, and was found to proceed from an abscess caused by meningitis. The report is as follows: "The left centrum ovale displays a distinct and diffused white softening; also the anterior two-thirds of the corpus striatum are softened; the posterior third is gone, and is replaced by a collection of dense greenish pus which occupies the anterior horn of the lateral ventricle on the left, and, extending by irregular ways towards the base of the brain, enters the orbital convolution and the fissure of the Sylvian artery. The cavity is lined by a thick, hard, pseudo-membrane, which, however, is wanting in the inferior extensions. The opened skull and dissected brain would seem to indicate that the otorrhœa had determined the abscess to the centrum ovale, the abscess having thus remained latent for many years without injuring the intellectual development of the boy, and perhaps manifesting its noxious action by anæmia and weakness of the organism. After many years of quiescence, without any known cause, pus commenced to make its way towards the base, basilar meningitis ensued, and with it all came the final scene. That the process had been in existence a long time was proved by the chronic hyperplastic pachymeningitis and the thick point of origin of the abscess—although, according to Körner's observations, no abscess from otitis could ever have lasted more than a year and a half. But would it have been possible to foresee everything? There had been a suspicion of otorrhœa, but it had entirely ceased for the space of eight years. If this etiological criterion led to the idea of an abscess, why did the tuberculosis of the father and mother and the death of all his brothers not lead to the diagnosis of basal tubercular meningitis?

The light furnished by these etiological deductions seems to fail us as soon as we apply it to a solid fact. Thus, one who falls upon his feet or his thigh, but who receives no blow or injury to the head, cannot be supposed to be affected with cerebral abscess; yet, nevertheless, he may die from it; while one who shows traces of a suppuration of the tissues which surround the bones of the cranium would lead to the belief that he was suffering from an intracranial abscess, and yet may die instead from sarcoma and encephalic tuberculosis; and, again, one who for eight years has recovered from otorrhœa, and who seems destined to die from tuberculosis, succumbs to suppuration of the brain. Sometimes the necroscopic examination of these patients offers a real surprise. Fortunately, the latency is seldom complete, or, at any rate, ceases to be so after a certain time. The physician can then hazard a suspicion. He must know that a chronic abscess, as the account of the case just related shows, may present the symptoms of a basal tubercular meningitis, but often proves to be the contrary. No diagnosis, however thorough, is enough to distinguish in

some cases between these two processes, which nevertheless, both in nature and position, differ so widely. As a rule the clinical student must remember that the chronic abscess, of itself, has few or no morbid manifestations; but that it shows them in certain developments, such as meningitis, the penetration of pus into the healthy brain tissue, the breaking of the abscess into the ventricles or under the meninges, extensive softenings, &c.; but in the case of meningitis preceded by some sign which denotes the chronic abscess, as happened in the last-mentioned case, the diagnosis of the abscess may be made, as we made it, although the final symptoms may be precisely those of basal meningitis. Sometimes, however, the contrary occurs—that is to say, a tubercular meningitis resembles the abscess so much as to prevent any other conclusion. I know that the pointing out of a difficulty is not so good as showing the way to overcome it; yet it is undeniable that the more we admit the possibility of a diagnostic error, the more keen we become to avoid it.

(To be continued.)

AN ABSTRACT OF

A Lecture

ON

THE CONDITIONS OF CURE IN CANCER,

WITH ILLUSTRATIVE CASES.

Delivered at the Cancer Hospital, Brompton, on Feb. 23rd, 1894,

BY HERBERT SNOW, M.D. LOND., &C.,

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[THE lecturer began by quoting, as an example of the ideas current even among the more educated classes upon the above topic, a phrase recently uttered at a public function by an eminent bishop of the Established Church: "Everyone knows that who once has cancer always has cancer." Pointing out that the popular sense of this word as synonymous with "malignant disease" coincided with the only plausible scientific theory which accounted for all the phenomena—viz., that of autositic cell reversion—he stated that the operating surgeon of the present day really claimed the power of permanently eradicating the various lesions known as "malignant," provided only that certain easily fulfilled conditions were placed within his grasp; and that when he failed, the causes of ill-success were now clearly understood in a manner impossible to the practitioners of the preceding generations. He showed that cancerous disease nearly always produces death by reason of the auto-infective qualities acquired by its cell elements and their mechanical transmission to distant parts; then discussed the obstacles to surgical cure presented by the different species in the ascending scale of complexity, beginning with rodent ulcer and ending with that form most closely identified with the popular conceptions of "cancer"—viz., carcinoma of the female breast. He continued as follows:]

Rodent cancer or Rodent Ulcer is the "least cancerous of cancers," as showing in its tardiest and mildest degree the "progressive tendency to death," and as being totally devoid of auto-infective phenomena in the shape of metastatic deposits. Though sometimes loosely used, the term correctly denotes only cancer of the short hair follicles, which is generally found in or near the lower eyelid, microscopically consisting in an aberrant reproduction of hair-follicle structure. As there are no secondary offshoots, the lesion is readily extirpated by knife or caustic within the first eighteen months or two years of inception. [The case of an officer thus operated on in 1885, and dying at the age of ninety-six in 1893 without recurrence, was here referred to.] At a later stage cure is impeded by the proximity of numerous bony structures covered by periosteum, a tissue speedily prone to malignant infiltration of any kind. Next ranks Epithelioma, the cancer of the epithelial cells, coating, skin, or mucous membrane, clinically differentiated from Carcinoma, the cancer of secreting glands, by the important point that the metastatic particles are arrested by the adjacent lymph glands and only very rarely reach the bloodstream. Hence radical extirpation is effected by the removal of all the dangerous glands near simultaneously with that of the primary lesion, provided that this removal takes place before the relatively late stage of enlargement. For practical purposes three stages of growth in secondarily implicated lymph glands must be insisted on: (1) one of insidious deposit not recognisable by any symptom; (2) one of tenderness on pressure without enlargement; (3) one of increase in bulk. Each of these occupies at least a fortnight, often more. The track of infection along lymph glands is always definite and susceptible of accurate prediction; the fact of infection having taken place must always be assumed after the lapse of a certain time, varying with the site. To wait till glands enlarge before proceeding to their excision is usually to sacrifice the patient's life, as by that time still more distant organs of the lymphatic system will have reached the preceding stages. Thus, in epithelioma of the Lips the "infection path" lies through the submaxillary lymph glands situated at the anterior edge of the salivary gland similarly named; and on an average, secondary deposit takes place here within six months, frequently sooner. Hence it is rarely permissible to extirpate a labial cancer without synchronous dissection out of these latter, whether enlarged or not. The 38 per cent. of cures ascribed by a popular author, on the faith of German statistics, to a simple V-incision without attention to these glands is, in my opinion, vitiated by the obvious inclusion of non-malignant cases in the figures cited. On the other hand, in the Tongue the infection extends with far greater rapidity, always within six weeks, often in half that time. The dangerous glands are also the submaxillary in cancer of the anterior two-thirds: in cancer of the posterior regions, the cervical, just behind the angle of the lower jaw. The following cases exemplify the principles of treatment; it is not thought necessary to cite any affecting the lips or integument.

CASE 1. *Epithelioma of the tongue.*—A woman aged sixty years had an ulcer of four months' duration situated far back on the right edge of the tongue and having indurated edges; also lancinating pain shooting into the ear for several weeks together, with slight enlargement and tenderness of the right submaxillary lymph glands. Wide excision of the sore, leaving the bulk of the tongue intact, was done with the thermo-cautery, the glands being dissected out by submental incision. The operation was performed in April, 1886, and the patient was in good health (no recurrence) in January, 1890, when last heard from.

CASE 2. *Epithelioma of the tongue.*—A man forty-six years of age was admitted into the Cancer Hospital, Brompton, with a typical cancerous sore one inch from the tip of the tongue on the right side, which had been present for three months. It had an excavated base, with livid, hard, everted edges, and there was darting pain. Half the tongue was excised, with the corresponding glands in the pre-enlargement stage; the microscope revealed the characteristic features of epithelioma. This was done in June, 1886; the man was not seen again till March, 1891, on which occasion he reappeared on account of an attack of eczema; he was otherwise free from disease.

CASE 3. *Epithelioma of the tongue.*—A man sixty-five years of age had a prominent fungating livid sore half an inch in diameter situated at the posterior margin of the left half of the tongue. It had existed two and a half months; there was neuralgic pain darting up to the ear; no gland enlargement was present, but there was slight tenderness at a spot below the left angle of the jaw. The entire organ was removed, together with the glands at the site indicated. Under the microscope the usual globes épidermiques &c. were seen. The operation was performed in April, 1891; there has been no sign of recurrence up to the present time (January, 1895).

CASE 4. *Epithelioma in the floor of the mouth.*—A man forty-four years of age had suffered from a slight ulceration of the frænum for one year caused by a fish bone; he had felt pain for eight weeks only. The sore was very vascular, with indurated base and edges at this spot, involving the gum. On the right there was a cluster of enlarged glands the size of beans; those on the left side were tender, just beginning the enlargement stage. The tongue being threaded and held out of the way, the diseased part was freely excised by the thermo-cautery, the periosteum of the lower gum

being well cauterised at the same time, and the glands on both sides dissected out. This was in October, 1892. In February, 1893 a gland the size of a horse-bean, at the edge of the mylo-hyoids in the middle line, was removed. There has been no recurrence (December, 1894).

In the rectum and uterus operative surgery can, of course, deal only with the primary lesion. Malignant disease of the former organ (Cylindroma) fortunately develops slowly and seldom infects lymph glands or liver for a twelvemonth from inception. Hence free excision within that period should suffice. The patient whose case has been cited,[1] and which was one of special difficulty, still remains in the best of health; here a bleeding pulpy mass, of from one to two years' duration, projected into the gut from a part of the anterior wall so high that its uppermost limit could be touched only under anæsthesia; the age at the date of the operation (May, 1890) was seventy-five years. This illustrates a general rule that malignant tumours growing without hindrance from a free surface are less prone to infect the glands than those bound down by dense fibrous tissue, such as the familiar breast scirrhus. Cancer of the uterine cervix (usually carcinoma, less often epithelioma) must be dealt with within eight weeks; otherwise recurrence will quickly ensue by way of the lymphatic plexus in the vaginal submucosa. Supra-vaginal amputation is the treatment; as the disease to the last often advances no higher than the internal os, and as the "infection path" lies in the direction indicated, hysterectomy should be reserved for late cases, and for disease within the uterine cavity. In that of rapidly recurring carcinoma, high up in the cervical canal, diagnosed within six weeks, and extirpated by escharotics,[2] the patient still remains well. The date of operation was July, 1883.

With malignant developments of the connective tissues (true sarcoma) a distinct series of clinical phenomena is encountered. There is here no infection of adjoining glands, per the lymphatics; if any such not in contact with the tumour are found diseased this is a sign of diffusion by the blood, and is associated with metastases also in the viscera. To eradicate, removal must therefore take place before cell particles have passed into the blood current. Sarcomata of the long bones should be treated by amputation at the proximal articulation; in consequence of the receptive qualities of their marrow, and its intimate association with the circulation current, the operative surgery thereof, which has hitherto generally neglected this precaution, offers far less favourable results than of the short or flat bones. Within the mamma and elsewhere connective tissue growths are commonly intra-cystic or encapsuled, a fact which tends greatly to delay the advent of blood infection.

CASE 5. *Recurrent spindle-celled sarcoma of the lower jaw.*—A man fifty-one years of age appeared at the Cancer Hospital, Brompton, with the body of the lower jaw at the symphysis greatly thickened by a hard nodular mass projecting inwards under the tongue, and where free of the bone, about one inch in diameter, filling all the front part of the floor of the mouth. The glands on both sides were infiltrated by contiguity and blended with the preceding. A previous operation had taken place three months since. Free removal of the tumour with two-thirds of the bone was effected in November, 1886. The microscopic appearances were as above. No recurrence had taken place in July, 1893, when the patient was last seen.

CASE 6. *Spindle-sarcoma of mamma recurrent after two previous operations; cure.*—An unmarried woman fifty-three years of age was admitted into the Cancer Hospital, Brompton, on Oct. 10th, 1884. Her medical attendant had previously performed two operations on the right breast, the site of which was occupied by a large scar. Under this there was a prominent tumour as large as a child's head, together with several round bosses, two of which fluctuated, one being of stony hardness. The total duration of the disease was six years, but there was now rapid increase, a dull aching pain present daily becoming more severe. Excision was performed, the axilla being untouched. A mass of cysts was removed, containing abundant embryonic tissue microscopically identical with that of an ordinary spindle-celled sarcoma. In December, 1893, the patient was in good health, and there had been no return.

CASE 7. *Spindle sarcoma of the breast.*—A married woman fifty-six years of age, with ten children, was admitted into the Cancer Hospital, Brompton, on Nov. 29th, 1886. A hard, solid tumour the size of a hen's egg was deeply situated in the right breast; there was no glandular enlargement. The patient stated that the duration was five weeks; she had done much hard work, lifting weights, &c. On removal the growth was microscopically shown to be a spindle-sarcoma; the axilla was untouched. No recurrence had taken place up to December, 1893.

CASE 8. *Cystic spindle-sarcoma of the breast.*—A married woman fifty years of age, with eight children, was admitted to the Cancer Hospital, Brompton, on May 31st, 1886. The patient had a tumour as large as a walnut at the root of the right nipple; this retracted, and there was induration around it; occasional lancinating pain with sensation of heat was experienced; there were no enlarged glands. On removal it was found to be a cyst containing dark-brown fluid with cholesterine crystals; part of the wall was extremely hard and nodular; under the microscope it consisted of embryonic spindle-celled tissue (sarcoma). The patient was well and without further trouble when seen on Dec. 22nd, 1893.

Space permits no more than a passing reference to the less prevalent cancer-species. Of one, however, Melanotic cancer of the skin, it is necessary to remark that, this being now shown to be a product of the Malpighian pigmented epithelium, "anticipatory" removal of the neighbouring lymph glands is demanded exactly as in ordinary epithelioma. We have next to consider that local malady which is most answerable for the quotation cited in the opening sentence, and which for generations has most strongly coloured the universal conceptions of "cancer." Carcinoma of the mamma furnishes all those obstacles to surgical eradication which we meet with in carcinomatous or analogous lesions elsewhere, with one of very grave significance peculiar to itself—viz., *insidious marrow infection*. The disease invariably begins in a minute tissue area, in a single acinus—it may be, in a single cell—following always the operation of some definite exciting cause. In 11·5 per cent. this is mechanical violence; a blow often serves to indicate the precise date of inception. In the remaining 88·5 per cent. mental trouble is the most potent excitant, producing aberrations in the normal devolution of the organ, carcinoma being only one of several lesions due to interference with this process. The mamma undergoes *evolution* between the ages of fourteen and twenty-five; for the next ten years temporary *involution* ensues upon pregnancy, a process of development followed by a resting stage, which is copied in slighter degree by the phenomena of each menstrual period.[3] The *devolution* or stage of permanent degeneracy commences about the age of thirty-five, and is the epoch affected by carcinoma almost exclusively. Infection of the lymph glands in the adjacent axilla by the last-named takes place early; it is rarely delayed beyond eight weeks, occasional exceptions being presented by—(1) scirrhous growths within the dense fibrous structures of the nipple, which are exceptionally chronic; (2) "atrophic" cases in withered mammæ; (3) carcinomata at the sternal border, which tend first to infect the thymus by lymphatics perforating the chest wall. When enlargement of the axillary glands takes place the normal lymph-current is unable to pursue its ordinary course, and regurgitation takes place in abnormal directions. Thus particles pass, on the one hand, into the marrow of the adjoining humerus (normally this bone is the earliest affected in the majority of instances), and, on the other hand, into the residual thymus, thus producing the condition denominated the "sternal symptom," a progressive prominence of that bone between the second costo-sternal articulations, the most unmistakable evidence of marrow deposit. Implication of the marrow takes place simultaneously with palpable enlargement of the axillary glands, which, as has been pointed out, is a relatively late stage of cell growth therein. Its occurrence must therefore be assumed in every average case of more than eight to twelve weeks' duration, those "atrophic" growths which permit life for from twenty to thirty years constituting an exception. Marrow infection has been shown to occur in at least eight out of every ten instances of mammary scirrhus; it necessarily leads eventually to the passage of cell-particles into the circulation, with metastases in the viscera. After excision of the mamma at a later period than eight to twelve weeks the symptoms become manifest after a variable period of years, rarely exceeding five. In order to surgically eradicate

[1] Brit. Med. Jour., Oct. 11th, 1890.

[2] Transactions of the Medical Society of London, vol. viii., p. 304.

[3] See remarks on this point in the Proclivity of Women to Cancer.

a carcinomatous breast, therefore, an operation must take place within six to twelve weeks of inception, prior to lymph gland enlargement, and before the possible advent of marrow infection. And not only must the tissues be very freely removed, with careful consideration of the exigencies in each individual case, but the axilla at the same time carefully cleared before the lymph glands have had time to enlarge. The old-fashioned text-book operation by two oval incisions passing close to the palpable lesion is necessarily followed by "recurrence" in the cicatrix within a few weeks or months at the outside; the modern methods of procedure rarely fail to secure absence of visible deposit for at least two years, even in what must be considered advanced cases of more than a twelvemonth's duration, complete success being then precluded by the previously established marrow condition. The following instances exemplify the conditions both of success and of relative failure.

CASE 9. *Breast scirrhus excised in February 1887; no recurrence.*—A married woman forty-two years of age, with four children, had a hard "lump" above the right nipple in the breast tissue; the duration was stated to be five weeks. There were intermittent burning sensations; in the axilla tenderness was felt on pressure, but no enlargement; no marrow symptoms were present. Operation was advised on Dec. 20th, 1886, but the patient refused until Feb. 27th, 1887. Free removal of the breast parenchyma, together with the contents of the axilla, was performed; under the microscope the growth exhibited the ordinary phenomena of early carcinoma. The patient has had no reappearance; she was last heard of in good health and with no marrow symptoms in December, 1893.

CASE 10. *Scirrhus excised in May, 1880; no recurrence.*—A married woman fifty-six years of age, with no children, was admitted into the Cancer Hospital, Brompton, on May 21st, 1880. A hard scirrhous "kernel" as large as a walnut was present in the sternal half of the right breast. She stated the duration to be two months. A gland in the axilla was slightly enlarged. There was occasional lancinating pain; no marrow symptoms existed. Excision was performed, with careful dissection of a wide margin of the seemingly healthy tissue around the breast tumour and evacuation of the axilla. The disease on section proved to be a typical carcinoma. The patient came again on July 11th, 1892, for a small ulcer on the gums; there had been no recurrence of cancer in any shape.

CASE 11. *Breast scirrhus excised in October, 1885; two recurrences; subsequent immunity.*—A married woman aged forty-five years, with one child, was admitted to the Cancer Hospital, Brompton, on Oct. 18th, 1885, with nodulated tumour ("hazel nut") deeply situated in a gland tissue at the upper part of the right breast; a gland as large as a horse-bean in the corresponding axilla. She stated the duration to be one year. On removal the microscope revealed a typical acinar carcinoma structure, with the remarkable and probably unique addition of abundant myeloid corpuscles. In February, 1887, the patient was readmitted to hospital for the excision of a recurrent nodule at the inner end of the scar, with another gland in the axilla. Again, in October of the same year, two deposits as large as beans were dissected out of the pectoralis fibres. All these latter presented the same curious microscopic features as the primary lesion. The patient experienced no further trouble, and was last seen on May 21st, 1894, in good health and without any trace of cancer. From the previous rapidity of the reappearances and the long subsequent immunity, the permanence of the latter may reasonably be inferred.

CASE 12. *Encephaloid carcinoma of the breast; immunity for four and a half years; death from another cause, with no trace of disease at necropsy.*—A married woman aged fifty-two years, with fifteen children, was seen on Feb. 22nd, 1886. The left nipple was retracted. At its root there was a movable tumour, rapidly growing, the size of a small orange, of stated duration seven months. There was slight enlargement of the axillary glands. On removal the appearances were as above. Death took place in August, 1890, and was ascribed to gall-stones. A necropsy was made (in the provinces) by two medical practitioners, who "could detect no trace of cancer." In this and the case following, which were not personally observed until their termination, it is not, however, possible to be certain that marrow deposit was absent.

CASE 13. *Breast scirrhus excised in July, 1888; death from tubercle in 1891.*—A married woman fifty-three years of age, with six children, had to the inner side of the left breast a movable solid tumour ("walnut"); a gland the size of a bean was in the axilla. There was continuous aching with occasional lancinating pain; she stated that its duration was ten weeks and consecutive to a blow at that period. After excision it proved to be a typical scirrhus. The patient was discharged well on Aug. 24th, and has not been seen subsequently. According to her relatives she died on Feb. 14th, 1891, from "rapid consumption, as shown by the doctor's certificate; she had no symptom whatever of the return of the cancer."

CASE 14.—*Breast carcinoma excised; symptoms of marrow infection delayed until ten years afterwards; good health with no palpable cancer deposit fifteen years and a half after operation.*—A married woman fifty-one years of age was admitted into the Cancer Hospital, Brompton, on Oct. 17th, 1879. At the outer aspect of the left breast there was a hard, movable scirrhus as big as an orange, and in the axilla a gland the size of a large bean. She stated the duration to be six months, and attributed it to ill-usage by her drunken husband. After excision of the breast and axillary contents no complaint was made of any bad symptom until February, 1889. Then the lumbar and scapular gnawing "rheumatic" pains pointing to marrow deposit were first mentioned; no deposit in any other tissue was to be found on close examination. The patient (from a distant provincial town) was not seen again until Aug. 3rd, 1891, when a new scar was visible near the axillary end of the old one; and she stated that a "lump" had been removed at the local infirmary a year previously. The note in my out-patient book at this date runs: "Cicatrix healthy; no tumour or gland enlargement anywhere. The 'sternal prominence' very conspicuous; aching pains down left arm, through left scapula, and across front of chest; tenderness on pressure at two points on left scapula just above angle." The patient attended again on Jan. 7th, 1895. She is a florid, robust-looking woman, with a marked protuberance of almost the entire sternum, and complained of aching soreness in that region, but otherwise she was free from any trace of cancerous disease. The long delay in appearance of marrow symptoms here is unprecedented in my experience. The two cases following exhibit the average rule.

CASE 15. *Excision of breast scirrhus; marrow infection not apparent till five years subsequently, followed by nodular deposits.*—A married woman forty years of age, with six children, was admitted into the Cancer Hospital, Brompton, on June 13th, 1887. To the outer side of the left nipple there was a hard scirrhous kernel the size of a walnut and freely movable, and in the axilla a gland as large as a bean. The stated duration was three months, but the real duration, as inferred from the physical condition, was probably from six to twelve months. No marrow symptoms were present. After the usual operation nothing wrong was observed until Dec. 2nd, 1892; then the "sternal symptom" made its appearance, and slowly increased to the ordinary stationary point. A year later (Dec. 4th, 1893) two nodules, each as large as a pin's head, were detected close to the sternum, rather deeply situated in the second intercostal space. On Jan. 1st, 1894, a third minute speck was found in the middle line, with a lymph gland as large as a hazel nut in the right axilla. Excision of all these was performed, and the patient was discharged well. The scar left by operation on the left breast and axilla has remained throughout perfectly sound, and the general health is fairly good. (Now, Jan. 1895, the patient is breaking down.)

CASE 16. *Removal of advanced breast carcinoma; no recurrence in situ, but death seven years subsequently from bone lesions.*—A married woman sixty-one years of age, with six children, was admitted to hospital in July, 1886, for very hard, round scirrhus an inch and a half in diameter at the upper part of the right breast. The stated duration was three months; the real duration was evidently much longer, apparently one or two years.[4] The disease was of specially chronic appearance; the glands were tender, but not appreciably enlarged; there were no marrow phenomena. The patient was a thin, worn, woman with a disorganised eyeball, which was simultaneously removed with the breast and axillary contents. She was in good health in March and November, 1889, but was then lost sight of until June 19th, 1893, when she reappeared with a cluster of diseased glands in the left axilla, the right remaining perfectly free and the cicatrix healthy. There was a small, livid nodule under the skin covering the xiphoid cartilage.

[4] Women almost invariably understate the period, the margin of conscious *suppressio veri* varying from six weeks to two years.

The most noteworthy physical sign was afforded by the sternum, which constituted almost a tumour, the whole bone projecting prominently forwards and being greatly thickened. In July paraplegia supervened, signifying deposit within the vertebræ, and death took place in September, 1893.[5]

CASE 17. *Excision of advanced breast scirrhus; marrow symptoms three years later; no palpable recurrence four years after operation.*—A woman fifty-four years of age had the left breast excised for a chronic scirrhous tumour, of at least eighteen months' duration, in January, 1881, with enlarged glands in the axilla. The health remained good till March 14th, 1884; then first appeared the "sternal prominence," with some dyspnœa and dry cough. In February, 1885, deposit was also found in both axillæ, but the patient was still able to do her work as a domestic servant. The scar left by the breast amputation was healthy. There was no subsequent attendance.

CASE 18. *Excision of advanced mammary carcinoma; marrow infection after two years; spontaneous fracture of sternum and tumour formation.*—A married woman fifty-two years of age had the left breast &c. excised in August, 1886. A mass of encephaloid carcinoma as large as an orange occupied the whole area; its stated duration was six months, but a blow one year previously more accurately fixed the inception. The glands were necessarily implicated. No note was made of the marrow condition, the routine occurrence of marrow infection in these cases not having been discovered until 1890. The patient was in good health subsequently until November, 1887; then, after turning in bed, she felt a sudden snap at the upper part of the sternum; she again attended the hospital as an out-patient, when marked thickening of the bone was the only lesion found. On July 23rd, 1888, a livid prominent boss as large as a child's head protruded from the spot indicated. The scar was healthy; there was no sign of axillary or of visceral deposit.[6]

CASE 19. *Ulcerated breast scirrhus of long standing; excision in March, 1892; immunity save for marrow infection to present time.*—A widow sixty-four years of age, stout, applied in August, 1888, with a cyst of twenty years' duration at the root of the left nipple. For the previous eighteen months there had been induration around this and lancinating pain (denoting carcinoma development). Operation was urged, but was declined till four years later (August, 1892); then the nipple was eroded (in its place being a scirrhous ulcer one inch in diameter), there was deep infiltration of the gland tissue at its base, together with deposit in the axilla. The "sternal prominence," as usual in stout patients, was well marked. There has been no recurrence to the present time (Jan., 1895); the woman is in good health and unconscious of any ailment.

CASE 20. *Advanced encephaloid carcinoma excised three years; no recurrence to present date.*—A married woman forty-three years of age, very stout, with large mammæ, had in the right breast a movable roundish mass the size of a pigeon's egg; it had been noticed for six months. There were also slight gland enlargement and intermittent darting pain, but no marrow symptoms. Excision was performed in October, 1891, when it was found to be a soft grey carcinoma; there were deposits in several axillary glands, the largest as big as a damson; their size had previously been obscured by the abundant fat. The patient still attends every two months as out-patient, but is without visible disease and is in excellent general health.

CASE 21. *Advanced scirrhus excised two years; no recurrence to present time, but progressive marrow infection.*—A widow sixty-five years of age, with one child, when seen had in the left breast induration and retraction of the nipple, which had been noticed for eight months; probably they were of much longer duration. Slight enlargement and tenderness of the axillary glands were present; the "sternal prominence" was very marked. An operation was performed in November, 1890. To present date the scar is healthy, and there is no trace of recurrent deposit other than of that in the marrow. The patient now begins to complain of severe aching, with sensation of pressure at the spot in question on the sternum; she also complains of rheumatic pains in both scapulæ, down the left arm, &c.

Note.—Continuous opium treatment commencing immediately after convalescence is strictly enjoined upon all my breast-excision cases in which any suspicion of antecedent marrow infection exists, and accounts for the prolonged immunity of some of the preceding cases. It is often, however, difficult to ensure in hospital patients living at considerable distances.

[5] Photographs of the sterna in this and in the case preceding were exhibited at the Nottingham meeting of the British Medical Association in 1892.

[6] The "sternal prominence" proceeds to actual tumour development in not more than 2 per cent. of the total cases. For original description of these insidious marrow lesions, and their recognition as of routine occurrence, see THE LANCET, March 7th and 14th, 1891; Brit. Med. Jour., vol. i. 1892.

THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD.

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WHETHER a trace of sugar exists in normal urine is a question of interest to chemists and physiologists, but one of no practical importance. For the clinical observer the presence or absence of glycosuria may be decided in about two minutes by the following simple test. A drachm of urine—or, what is nearly the same amount, 4 c.c.—is placed in a test tube about half an inch in diameter, and to this is added an equal volume of a saturated aqueous solution of picric acid, and half the volume—that is, half a drachm, or 2 c.c.—of liquor potassæ (P.B.).[1] An orange-red colour instantly appears as a result of the incipient reducing action of kreatinine upon picric acid at the ordinary temperature. The colour is deepened by boiling, and if after the liquid has been kept at the boiling point for about a minute a bright red colour appears through the test-tube when held up to the light, the urine for clinical purposes, may be confidently pronounced free from sugar. If an aqueous solution of glucose, in the proportion of not more than two grains to the ounce, be tested in the manner described, the liquid will be rendered so dark that no light is visible through the full diameter of the tube. I confidently assert that, for clinical and life assurance purposes, no other method of testing for glycosuria equals this for the ease and rapidity with which it may be conducted and for the absolute trustworthiness of the result. The presence of sugar having been thus ascertained, the quantitative determination may be speedily and accurately effected by means of the picro-saccharometer. The method of using the saccharometer is described in an appendix to this communication. Since the publication of my paper on Some Common Sources of Error in Testing for Sugar in the Urine,[2] and the correspondence to which it gave rise, I have obtained additional, and I believe conclusive, evidence that no trace of sugar is to be found in normal urine. The nature of this evidence I now propose to submit to the readers of THE LANCET. It will be remembered that in the paper referred to I attached great importance to my son George Stillingfleet Johnson's discovery that by the action of mercuric chloride the kreatinine, which is a constant constituent of the urine, is precipitated, in combination with mercury, as a definite chemical compound, from which, the kreatinine having been separated in a crystalline form, its ultimate composition and its reducing action upon cupric oxide and picric acid have been accurately determined.[3] The kreatinine having thus been separated from the urine, it is found that the filtrate exerts no reducing action upon either the copper or the picric acid test. In other words, there is found no trace of sugar. The picric acid test would detect one-hundredth per cent. of glucose if so small an amount were present, and that any sugar which might be present is not removed by the mercuric chloride process is proved by the fact that when a known weight of glucose is added to the urine it is found undiminished after the separation of the kreatinine. That by avoiding the application of heat and destructive chemical agents my son has succeeded in separating unchanged the natural kreatinine of the urine, and that this is the sole agent in normal urine which exerts a reducing action

[1] See a letter by the writer on the Value of Picric Acid as a Test, in THE LANCET of Jan. 23rd, 1894.

[2] THE LANCET, July 7th, 1894.

[3] The details of this investigation are published in the forty-third volume of the Proceedings of the Royal Society, and more briefly in the sixty-third volume of the Transactions of the Royal Medical and Chirurgical Society.

upon picric acid,[4] is proved by the fact that when the amount of picric acid reduction by urine has been accurately determined the corresponding indicated amount of Stillingfleet Johnson's kreatinine in aqueous solution is found to give precisely the same degree of picric acid reduction colour as the urine, when the liquids are undiluted, and in different stages of dilution until the amount of kreatinine is no more than one grain by weight in 200,000 minims of liquid, the comparison being made with a pale yellow solution of picrate of potash. To obtain the complete reduction of picric acid by an aqueous solution of kreatinine containing about a grain to the ounce, more potash is required than in testing normal urine. The amount of liquor potassæ (P.B.) must be one and a half drachms instead of half a drachm, and the liquid should be boiled for ninety seconds. The kreatinine in the urine appears to be associated with some substance which enables it to exert its full reducing action in the presence of a smaller amount of potash than is necessary when uncombined kreatinine is dissolved in water. In testing largely diluted solutions of kreatinine the usual half-drachm of liquor potassæ is sufficient. For comparing the colours resulting from testing diluted urine and an equally diluted solution of kreatinine the simplest plan is to place a drachm of each liquid in two test-tubes of equal diameter, to add to each a drachm of picric acid solution and half a drachm of liquor potassæ, then to boil for a minute, after which, the two tubes being placed side by side, the equality or the difference of colour can be observed. If, as has been asserted, glucose were present in normal urine in the proportion of not less than 0·05 per cent., about one-third of the reducing action upon picric acid would be caused by glucose, and the remaining two-thirds by kreatinine. Now, the extreme delicacy of the picric acid reaction with kreatinine in largely diluted solutions affords a simple and accurate means of detecting a mixture of a small quantity of glucose with kreatinine, whether in the urine or in an aqueous solution. I have ascertained by repeated experiments that a watery solution of glucose ceases to give any colouration with picric acid and potash when the dilution is carried beyond 1 part in 10,000 of liquid. If, therefore, the reduction colour in normal urine were in part due to the presence of a small proportion of glucose, the colour resulting from the analysis of the urine and of an aqueous solution of kreatinine of the same reducing power, which is equal when the two liquids are undiluted, would be unequal when the dilution is carried beyond the point—that is, one grain in 10,000 minims of liquid—at which glucose ceases to exert any reducing action upon picric acid. The urine would be paler than the equally diluted solution of kreatinine in proportion to the amount of sugar which it contains.

I have tested many specimens of normal urine by comparing the colour resulting from the picric acid test with a solution of kreatinine of equal reducing power, and I have invariably found that when the colours in the undiluted specimens have been equal they have remained equal after the two liquids have been diluted beyond the point at which the action of glucose must have been eliminated. It has occasionally happened that the reduction colour of the urine has been slightly under-estimated, and the kreatinine solution has consequently given a somewhat paler colour. In these cases the darker colour of the urine has been visible through every stage of dilution of the two tested liquids. The conclusion is that kreatinine is the only substance in normal urine that exerts a reducing action upon picric acid, and that not a trace of glucose is present.

The assumption that since sugar exists in the blood it must be found in normal urine ignores the fact that sugar, like albumen, is a nutrient material, the separation of either of which by the kidneys is wasteful, while, on the contrary, all the solid constituents of normal urine are excrementitious and their retention in the blood is injurious. The copious excretion of sugar in cases of diabetes is often associated with albuminuria, and in the advanced stages with structural changes in the kidneys. The sugar not being a normal constituent of the urine, its continual passage in large quantities through the kidneys injuriously affects their structure and functions, the result in some cases being a more or less complete suppression of urine. The conclusion derived from the experiments before described, that normal urine contains no sugar, is confirmed by the contrasted results obtained when a small but known quantity of sugar has been added to the urine. The following experiment is typical of many others that I have performed, with essentially identical results. A sample of urine (sp. gr. 1015) gave with picric acid a depth of colour indicating 0·6 grain per ounce calculated as glucose. To an ounce of this was added 0·3 grain of glucose. By this addition the amount of reduction was of course raised to 0·9 grain per ounce, two-thirds being due to kreatinine and one-third to glucose. The reducing power of kreatinine being less than that of glucose in the proportion of 10 to 12, the amount of kreatinine required to give the same colour as this saccharine urine was 1·08 grain in an ounce of water. The testing of the undiluted urine and the kreatinine solution respectively gave a red colouration of exactly the same tint. When the two liquids were tested after being ten times diluted the diminished reducing action of the glucose was shown by the fact that the colour of the urine was slightly paler than that of the kreatinine solution. The difference was more marked in the twenty times diluted liquids, and it was still more conspicuous when, the dilution having been increased to thirty, the proportion of the reducing material in the liquid was only 1 in 14,400, and the action of glucose was thus entirely eliminated. If it had not been known that one-third of the reducing action of the undiluted urine was caused by the added glucose, the fact might have been ascertained by observing that in order to equalise the colour of the two liquids when tested after dilution had been carried beyond the point at which glucose ceased to exert its reducing influence, one-third of its volume of water had to be added to the kreatinine solution. Here, then, we have a simple method by which not only the absence of sugar from normal urine may be ascertained, but the exceptional presence of a small amount may be quantitatively determined, such exceptional presence being, I believe, very rare indeed.

The following experiment I have repeatedly performed with the same invariable result. A sample of urine gave with the picric acid test a reduction colour indicating 0·8 gr. per ounce, calculated as glucose. A solution of kreatinine, in the proportion of 0·96 of a grain to the ounce, gave the same reduction colour. To an ounce of the urine was added a quarter of a grain of glucose, by which the reduction was increased to 1·05. The saccharine urine, after being diluted thirty times and tested, gave exactly the same colour as the solution of kreatinine and the same as the urine before the addition of glucose on being equally diluted. The reducing action of the glucose was eliminated by the dilution, while that of the kreatinine in the urine and in the aqueous solution still afforded an equal shade of colour. It will be seen that, while the result of these experiments confirms my son's statement that after the removal of kreatinine from normal urine by mercuric chloride the filtrate contains no trace of sugar, the evidence which I have obtained is of an entirely different and independent character. My experiments, however, are so far an outcome of his laborious and accurate investigations that I could not have performed them if he had not supplied me with the pure unchanged urinary kreatinine. The mercuric chloride and the picric acid process, by which the absence of sugar is proved, are free from the source of fallacy which is common to all the methods by which the presence of sugar has been supposed to be shown—namely, that of mistaking the product of chemical operations upon the constituents of the urine for a true pre-existing educt.

It is probable that many members of the medical and chemical professions will repeat the experiments which I have here described. For this purpose they will have to obtain the pure urinary kreatinine, which has hitherto been a difficulty. My son tells me that no specimen of kreatinine which he has purchased has been pure, and I have lately obtained from a German firm a sample labeled and charged as kreatinine which contained a mere trace of that substance, while the bulk of it had all the distinctive characters of kreatine. I have authority for stating that the pure urinary kreatinine will shortly be for sale at the Apothecaries' Hall, the society having made arrangements for its preparation by the process which my son has successfully initiated and described in the two papers before mentioned, one of the main points being that the crystallised kreatinine is obtained by evaporation *in vacuo*, since a boiling temperature alters its characters and often converts it more or less completely into kreatine by the addition of a molecule of water.

I have lately met with an exceptional specimen of

[4] Uric acid reduces cupric oxide, but not picric acid.

non-saccharine urine of specific gravity 1039. The urine was turbid with urates, cleared by heat, and contained no albumen; with nitric acid in excess the urine became nearly solid with crystals of nitrate of urea. The picric acid reduction was 1·6 gr., calculated as glucose, indicating 1·9 gr. of kreatinine per fluid ounce. The urine and the solution of kreatinine being diluted successively from ten to forty times gave with the picric acid test an equal shade of colour, or if there was any difference the urine was very slightly darker than the kreatinine solution at each successive stage of dilution. Only by this method of testing or by precipitating the kreatinine by the mercuric chloride process could this urine of high specific gravity, containing an excess of normal constituents, have been confidently pronounced to be free from sugar. The amount of kreatinine in this specimen is larger than in any urine that I have hitherto analysed. The average reduction with picric acid in normal urine is about 0·8 per ounce calculated as glucose, indicating practically a grain of kreatinine in each fluid ounce of urine.

Dr. Pavy in his work on "The Physiology of the Carbohydrates" (pp. 186–7) estimates the amount of sugar in normal urine to be "about 0·5 or a little over per 1000," but this estimate is arrived at by assuming that after the removal of uric acid the cupric oxide reduction found to occur is produced entirely by sugar. It will be seen, then, that Dr. Pavy entirely ignores the existence and the reducing action of kreatinine, and it is not a little remarkable that throughout the work in question there is no mention of the two almost ubiquitous cupric oxide reducing agents kreatine and kreatinine. It is certain that a portion at least of the reducing action of various tissues and liquids which Dr. Pavy attributes entirely to sugar is due to one or both of these organic bodies, yet there is no indication throughout his book that, being aware of this source of error in estimating the amount of sugar, he has been careful to guard against it.

It is interesting and practically useful to note that while glucose, kreatine, and kreatinine alike, though in slightly different degrees, reduce cupric oxide and picric acid, when boiled with an alkali there is a significant difference in the action of each upon picric acid at the ordinary temperature. Thus when picric acid and potash are added to a cold solution of kreatinine or to normal urine, of which that substance is a constant constituent, an orange-red colouration, the result of incipient reduction of picric acid, occurs immediately; with kreatine at least an hour elapses before any red colouration occurs, and with glucose there is an interval of at least six hours before any change of colour appears at the ordinary temperature. With each of the three substances the colour is gradually deepened in the course of from twelve to twenty-four hours, but in none of them is the reduction of the yellow picric to the red picramic acid complete until the liquid has been boiled for about a minute. With regard to the loss of reducing action upon picric acid by dilution kreatine is intermediate between glucose and kreatinine. The limit is one grain to about 50,000 mm. of water, being five times more than the limit of glucose, and four times less than that of kreatinine. The difference between kreatine and kreatinine as regards their reducing power in dilute solutions affords a means for the detection of a mixture of the two substances; while another mode of detecting the mixture, such as is found in Liebig's and other meat extracts, consists in precipitating the kreatinine by mercuric chloride, when the kreatine is left in the filtrate and may be detected by the picric acid reaction commencing in from an hour to an hour and a half at the ordinary temperature. It will be seen that the three substances kreatinine, kreatine, and glucose stand to each other in the same relation as regards the time required to develop the incipient picric acid reaction at the ordinary temperature, and also as regards the limit of dilution beyond which no reaction occurs even at the boiling temperature. In both these respects kreatine occupies a position intermediate between kreatinine and glucose, but in its reducing power upon picric acid at the boiling temperature kreatine is at the bottom of the list, being inferior to kreatinine in the proportion of about six to seven.

In conclusion, I may mention a simple test by which crystals of kreatine may be distinguished from those of kreatinine. The former, when placed in a test tube and heated for a few minutes in a water bath, lose water and become opaque, while the latter remain transparent. This easily applied test will enable a purchaser to ascertain whether the material which is sold as kreatinine is what it is declared to be. An aqueous solution of kreatinine gives with picric acid and potash at the ordinary temperature an instantaneous red colouration; a solution of kreatine gives, when cold, no red colour for at least an hour.

APPENDIX.

DIRECTIONS FOR THE QUANTITATIVE ESTIMATION OF SUGAR IN URINE BY SIR GEORGE JOHNSON'S PICRO-SACCHAROMETER. MADE BY MESSRS. C. E. MÜLLER & CO., 148, HIGH HOLBORN, W.C.

The following solutions are required:—

1. Standard solution of ferric acetate, equal in tint to that yielded by a solution of glucose containing 1 grain per fl. oz. This standard solution is prepared as follows:—

℞ Liquor ferri perchloridi fortior (P.B., sp. gr. 1·42)	ʒj.
Acidi acetici glacialis (P.B., sp. gr. 1·058)	ʒiv.
Liquor ammoniæ (P.B., sp. gr. 0·959)	ʒij.
Aquam destillatam	ad ʒiv.

Mix first the iron and the acid; then add the ammonia, and water up to 4 fl. oz.[5]

2. Saturated solution of picric acid, prepared by boiling the crystals with distilled water in the proportion of 6 grains to 1 fl. oz., and allowing the excess to crystallise out on cooling.

3. Liquor potassæ (P.B., sp. gr. 1·058).

Apparatus required.

1. A tube about 12 inches in length, graduated into 100 cubic centimetres, with longer divisions at each 10 cubic centimetres, accurately stoppered and lipped.

2. A tube, half the above length and of equal diameter, accurately stoppered to hold the standard solution.

3. A boiling tube, 10 inches long, ¾ inch in diameter (internal), lipped, and graduated up to 4 fl. drachms.

4. One drachm measure.

Method of performing the Analysis.

Measure 1 fl. drachm of urine into the boiling tube. Add 1 fl. drachm of the saturated picric acid solution, and ½ fl. drachm of liquor potassæ. Make up to the 4 drachm mark on the tube with distilled or rain water. Heat over a spirit or gas lamp, and keep the liquid boiling for about a minute. Cool by dipping the tube after a minute in cold water, and ascertain that the cold liquid measures exactly 4 fl. drachms. If less, make up to the 4 drachm mark with distilled water; if more, evaporate down to the 4 drachm mark. If the colour of the boiled liquid is the same as that of the ferric acetate standard or paler, the urine is either free from sugar or contains less than 1 grain per fl. oz. If the colour is paler than the standard, boil with 2 drachms of urine instead of 1, then divide the indicated reduction by 2. In analysing an undiluted urine the phosphates precipitated by the potash often cause turbidity, which must be removed by filtration before the colour can be accurately estimated. It should be borne in mind that all normal urines reduce picric acid to an extent equivalent to from ½ grain to 1·2 grain of glucose per fl. oz. This reduction is due to kreatinine. This should be allowed for when the quantity of glucose present is very small. If the colour of the boiled liquid is darker than the standard, introduce it into the graduated tube until it stands at 10 divisions, whilst the stoppered tube at the side is filled with the ferric acetate standard. Now dilute the dark-red liquid in the graduated tube with distilled or rain water till the colour is the same as that of the standard. Each division above 10 = 0·1 grain per fl. oz. Thus, 13 div. = 1·3 grains, 30 div. = 3 grains per fl. oz., &c. If more than 6 grains per fl. oz. are indicated,[6] dilute the urine 10 times by pouring urine up to 10 divisions on the graduated tube, and distilled or rain water up to 100. Then analyse the diluted liquid as before. In this case each division on the saccharometer indicates 1 grain of sugar per fl. oz. Thus, diluting from 10 up to 48 divisions shows that the urine contains 48 grains of sugar per fl. oz. If the urine, when 10 times diluted, gives a colour paler than the standard, it contains less than 10 grains of sugar per fl. oz. Another portion should then be diluted 5 times by filling the graduated tube up to 10 divisions with urine, then up to 50 divisions with distilled or rain water.[7] The analysis is performed as before. The value of the divisions now will be half that with a 10 times

[5] The ferric acetate standard may be obtained from any pharmaceutical chemist.

[6] The reason for this is that 1 fl. drachm of picric acid solution is sufficient for the decomposition of not more than that proportion of sugar.

[7] The dilution of the urine may be more conveniently made by pouring 5 or 10 c.c. into a 50 c.c. flask and adding water up to the 50 c.c. mark.

diluted sample. Thus, 18 divisions would indicate 9 gr. per fl. oz. If the urine has a specific gravity of 1035 or more it should be at once diluted 5 or 10 times before commencing an analysis.

The percentage weight of sugar to the volume of urine may be ascertained by dividing the number of grains per fl. oz. by 4·8

Savile-row, W.

FRACTURE OF THE NECK OF THE FEMUR IN THE EIGHTY-EIGHTH YEAR OF AGE; RECOVERY, WITH BONY UNION.

BY W. PUGIN THORNTON, M.R.C.S. ENG.

FOR anybody in the eighty-eighth year, after fracture of the neck of a thigh bone, to recover sufficiently to be able to walk with the aid of crutches warrants, I think, the publication of the case. A retired colonel, aged eighty-seven years on his last birthday, in vigorous health and accustomed to daily unassisted outdoor walking exercise, had driven on the afternoon of April 2nd, 1894, a one-horse four-wheeled carriage two miles in the country. He was standing before the horse, altering the bit, when it suddenly bolted and knocked him over. He was found shortly after the accident sensible but helpless on the ground. After some delay he was brought into the town in a carriage. I saw the patient two hours after the accident, and helped to carry him into his house. He complained of excruciating pain about the right hip on any movements of the leg, which he did not feel when the limb was at rest. This leg was helpless, slightly everted, and apparently without shortening. When moving him from the carriage to his bed he could, when supported, bear weight on the left leg. On sending a message to Messrs. Preston and Prentice, surgeons in this town, these gentlemen arrived in about an hour's time, very acceptably bringing chloroform, splints, &c. We then put the patient under chloroform and, having first emptied the bladder, the urine being clear, examined the right leg. I immediately found crepitus at the neck of the femur. Mr. Preston then examined and then Mr. Prentice, but neither produced the evidence of fracture. We put up the leg in a splint extending from the axilla to some inches beyond the foot. On the following day, at 12 A.M., the patient's temperature was 101½° F. It reached this height once again in April. Three times between April 3rd and June 3rd it was 103½°, otherwise ranging from 100° to 97°. The pulse during these two months usually kept from 80 to 90, and the respiration from 20 to 24, but at times the patient had severe attacks of sighing, which occasionally ended with breathlessness, and hardly an appreciable pulse. These attacks were relieved by brandy and permanently stopped by citrate of caffeine. As he was delirious for the first few nights after the accident it was necessary to have four nurses. Besides being powerful, he was a heavy man, so that two nurses at night time and two during the day for the first three weeks, until he could help somewhat in being turned on to his side, were a necessity. For the first month he was kept on a water-bed, and after that time on an American wire-braided mattress. When on the water-bed a small sore came on his back, but through the assiduous care of his nurses it only lasted a few days. On the fifth day after the accident pain was felt in the left leg, and a bruise was noticed close above the knee to half-way up the thigh, running inwards, and corresponding to the breadth of the tire of a carriage wheel. From that time this leg, especially at the back of the knee, gave the patient more pain than the right; and when he first attempted to walk it was the most painful of the two. On May 14th the long splint was taken off and sandbags were used for a fortnight. He was measured by Mr. Hawskley for a Durham's steel screw splint, so that I might get him sooner out of bed than I could otherwise have done. His right leg at that time was almost entirely free from swelling and could be flexed without pain. He could also, with a little assistance, turn himself in bed and could sit up with the aid of a bed-rest for some hours; but between the time of measuring and fitting on the splint the patient one day, in the absence of the nurse, assisted by a relative, so exercised his leg that the same evening there was a rise of temperature, a restless night, and soon a thick swelling under the whole length of the ilio-tibial band of the fascia lata. This swelling remained the same for more than a month. It could be broken up by pressure into portions of any size. At the same time the pain at the hip returned, and the leg and foot were as œdematous as they had been after the accident. Accordingly I had to give up all idea of using Durham's splint, and could only continue keeping the patient in bed. At this time the right leg measured in length half an inch less than the left. On Aug. 16th I had him up for the first time, he having been four and a half months in bed. He went out in a bath-chair in the garden on the 29th, and for a three hours' drive in the country on the 31st. At the present time the patient is very well in health, and daily goes into the garden in a bath-chair and sometimes for a carriage drive. He is only able to walk a short distance with the aid of his crutches. I do not expect that he will improve in this respect on account of his age.

Canterbury.

CHLOROBROM IN SEA-SICKNESS.

BY WALTER FREDERICK DALE, M.R.C.S. ENG., L.R.C.P. LOND.

ON my outward voyage to the Falkland Islands seven years ago, to take medical charge of the employés upon a tract of country there, I had a very bad experience of sea-sickness. I tried in succession a number of drugs which had been mentioned as useful, and found them all equally useless. In course of time the actual outbreak of sickness passed away, but during the whole voyage I was never really well. I was never able to smoke. In THE LANCET[1] I noticed an article on the effects of chlorobrom in sea-sickness by Professor Charteris of Glasgow, and when I left the colony in May last year I took with me a supply of this solution. As recommended, I took a dose of it a couple of nights before going to bed. We left in the early morning, and when we got out into the sea-way a fairly good sea was running, but I was able to stay on deck all day. At night I had some more chlorobrom and was not sick. At most I felt only an occasional slight nausea. The ship was very full, and the captain very kindly gave up to my wife and myself his cabin, which was fitted with two berths—one parallel, and the other at right angles to the long axis of the steamer. I had thus an opportunity by changing berths of converting pitching into rolling by taking the cross berth. On the third night I was just going to sleep in the parallel berth when I was suddenly aroused by a sensation of sea-sickness. The steamer began to pitch most fearfully, and I scuttled out of my berth to a cross sofa, and there I had a "few mighty mean moments." When the steamer gave an unusually deep dip of her stern I experienced a sensation in my abdomen as though all the intestines were drawn forcibly down about the spinal column, and I believe that by gravitation such was the case. My wife then woke up, and, seeing what a sorry case I was in, gave me the cross berth, and at my request handed me the bottle containing chlorobrom, of which I took about a dessert-spoonful. In about half an hour I repeated that dose. The result was that, although we had an awful night, I not only was not sick, but slept for a fair time during the storm. The next morning the wind had gone down, but the sea was still rather heavy. It was suggested to me that champagne was a very good thing at sea. I exhibited it internally and promptly re-exhibited it, and this was the only time that I was sick during the voyage. Moreover, I was able to smoke during the greater part of the time.

Now there are two possible sources of error in judging of the value of chlorobrom in this case. Firstly, while in the Falkland Islands I had a good deal of cutter work in visiting my patients, which might have made me a better sailor. But I doubt that, for I was never able to stop in the cutter's cabin in heavy weather. Secondly, the cross berth might have had something to do with my comparative immunity; but I am disposed to put down a good deal of my comfort to chlorobrom. The steamer that I came home in carried a German medical man, so that I could not give chlorobrom freely to my fellow-passengers; but I gave some to a lady who was ill and to a man who was having a very bad time of

[1] THE LANCET, April 21st, 1894.

it, and in each case it did good. If ever I go to sea again I shall certainly lay in a stock of chlorobrom. I quite believe, too, in the liver being acted upon before going on board and in cases where the cooking is likely to be bad. I am sure a stock of "comforts," which can be had nowadays in many attractive forms, is a wise investment. Further, I should say where a cross berth does not exist, one might be improvised with a bed-stand chair or a hammock, for I am sure it is the pitching that does the mischief. In support of this it just occurs to me that when I was on board a whaling ship the year before last in the Falkland Islands I asked the captain about the crow's-nest, and he said that when he was up there he did not mind the rolling; but as soon as the ship began to pitch he got sick and had to come down.

There are different views about the causation of sea-sickness; but, in my opinion, it begins in the brain. I noticed a rather curious thing when I was at the Falkland Islands that might, I thought at the time, have some slight bearing upon the view that sea-sickness was due to movement of the cerebro-spinal fluid. The great bulk of my journeys was done on horseback, and in consequence of the roughness of the ground the horse's paces were so irregular that "posting" in the saddle was impossible. We therefore rode military fashion—i.e., sat down and allowed the horse to pitch us up and down in the saddle by his movements. Horses were "rough" or "easy," according to the height of their lift, and there was a vast difference in the fatigue of riding them. But I have noticed repeatedly after riding a long journey (say, thirty miles) on a rough horse (when I had been sitting in my chair for about half an hour) a curious sensation as though somebody had put a hand against the back of my head and suddenly pushed it forwards, and it was always accompanied by a sickening sensation. It only lasted about a second or so, and I might get it twice in the course of the first half hour after getting off horseback, and then no more till after the next long journey on a rough horse. I believe—though, of course, I cannot prove it—that it was caused by cerebro-spinal fluid, which had been drawn down in excess of the normal into the spinal canal by the succussions in the saddle, suddenly escaping back into the fourth ventricle. I think the fact of chlorobrom influencing sea-sickness is a pretty good proof that the latter starts in the brain.

Welling, Kent.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ANURIA IN THE COURSE OF MALIGNANT UTERINE DISEASE.

BY J. J. STACK, L.R.C.P. EDIN., L.R.C.S. IREL.

A WOMAN aged sixty-eight years, a widow, consulted me in November, 1893, complaining of uterine hæmorrhage, a sense of weight and "bearing down" feeling, together with being generally "out of sorts." She had previously been under the treatment of a medical man in her neighbourhood, and had also been operated upon for cataract by Mr. Nettleship. On examination per vaginam there was found to be some slight tenderness and bleeding; the cervix was quite hard, and the womb immovable. There was some erosion round the os uteri. There was no perceptible abdominal swelling, but I thought I felt some abnormal hardness and enlargement of the ovaries. My diagnosis was that of carcinoma, but to what extent the tissues were involved I was unable to say positively; the patient being very nervous and irritable, I was restrained from pursuing my examination to the extent that I should wish. Her past history was that of a dyspeptic, and her chief complaint was constipation and piles. She suffered a good deal during her child-bearing days, and was worried also by financial mishaps. I could get no history of cancer in any of her family. Considering all the circumstances, I advised palliative treatment, believing that surgical interference was out of the question. The bleeding ceased after a hypodermic injection of $\frac{1}{30}$ gr. of ergotinine. I ordered vaginal injections of a warm solution of boric acid with a little cherry-laurel water. These were continued to the last; and under the circumstances she seemed to get on comparatively well, suffering no pain whatever but an occasional bearing down, which nearly always ceased when some slight hæmorrhage took place. She went to the country on a visit in the early part of September, 1894, and returned on the following month. During her visit she suffered from constipation, and an attack of jaundice supervened, which she attributed to the rich food of which she had been partaking. I again saw her on her return to town. She was then jaundiced and seemed to be very weak. She complained of passing very little water, and owing to her anxiety on that point I gave her two powders of symphorol, in conjunction with other diuretics, without any appreciable effect. Very little water, about a dessert-spoonful, passed for two days; then the kidneys refused to act altogether from Nov. 21st to 29th. I introduced male and female catheters frequently without any result, and am confident that the bladder was quite empty. She took powders containing compound powder of jalap and compound powder of elaterium, and also had half a grain of pilocarpine by the mouth. The latter produced violent diaphoresis, and the combination, I believe, averted uræmia, and distinct improvement followed their administration, though she felt very weak and depressed. I had a medical man's assistance on the 27th, who prognosed immediate death. She was taking champagne and brandy as stimulants. On Nov. 29th copious urination took place—a very cataclysm—and with it the patient's condition was completely changed from a semi-comatose state to that of great excitement, irritability, and want of sleep. She remained quite conscious for a few days, after which she lingered on till Dec. 7th. The jaundice, I believe, marked the incidence of metastasis. Her liver was much enlarged when she returned from the country. But what was the cause of the suppression of urine? Was it due to the presence of bile in the blood? The kidneys seemed to be quite normal, being free from sugar and albumen. There was no post-mortem examination. I cannot recall a similar case, either from observation or from medical authorities.

New-cross, S.E.

TWO CASES OF PHENACETIN RASH.

BY R. MILBOURNE WEST, L.R.C.P. LOND.

As there still seems some uncertainty about the existence of a "phenacetin rash," the following two cases may help to clear up the doubt.

Case 1.—A man aged twenty-eight years was taken with slight rigor, violent headache of a neuralgic character, and a feeling of nausea. As the headache formed the most prominent and painful symptom two five-grain phenacetin tabloids were administered. Three hours later I again saw the patient, who expressed himself as feeling better; his face, chest, and arms were, however, covered by a dense scarlatiniform rash, slightly raised from the skin surface, and causing a tingling, smarting sensation, as though, to use the patient's own words, he had "been exposed to a violent storm of sleet." Two hours after the onset of the rash it had disappeared, and next morning he was well. On several subsequent occasions I have administered phenacetin to him in doses varying from five to fifteen grains, and on each occasion the same rash, more or less pronounced, according to the dose, has made its appearance.

Case 2.—A young woman, subject to attacks of facial neuralgia, was in the habit of taking phenacetin for their relief in doses varying from five to fifteen grains. On each occasion, from between one to two hours after administration of the drug, an urticarial rash, presenting raised wheals, chiefly on the face and neck, and accompanied by a sensation of heat and tingling, appeared, lasting usually a couple of hours. In neither of the above cases were any other unpleasant symptoms caused by the drug.

Ealing.

AT the inaugural meeting of the Inverness Medical Society held in December, 1894, Dr. Mackay read a paper on a case of Myxœdema treated with Extract of Thyroid Gland and practically cured. Dr. Wilson Black contributed notes of two cases of Psoriasis in which the same remedy was administered; in one case it was successful, and in the other a temporary improvement resulted. We congratulate our brethren in Inverness on the foundation of a new medical society.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

EAST LONDON HOSPITAL FOR CHILDREN.

A CASE OF ACCIDENTAL ABLATION OF THE LEG WITHOUT FRACTURE; AMPUTATION AT THE THIGH; REMARKS.

(Under the care of Dr. ERNEST E. WARE, late resident medical officer.)

THIS account of the appearance of the contused and lacerated thigh stump and the after-effects on the patient of evulsion of the lower extremity illustrate an unusual case. The appearance of wounds following ablation of a limb varies according to the manner in which separation has been effected, whether the wound is at the part struck (or caught by machinery) or at a distance. As a rule in civil life when part of a limb is torn from the body the injury is done by machinery and the upper extremity is the one which suffers. This case, therefore, is additionally interesting, as the separation occurred through the knee-joint, the strong ligaments of that articulation being torn through. There was thus no ragged bony projecting point in the midst of the lacerated muscles, and no bone gravel to be ground into the tissues.

On Aug. 11th, 1894, a boy aged seven years was admitted to the East London Hospital for Children suffering from complete ablation of the right leg. On admission he was quite conscious, and related, as far as he was able, the manner in which the accident had occurred. The pulse was full and regular, the hands warm, and there had been no vomiting. There was very slight hæmorrhage from the stump, and apparently the boy had not lost much blood. On examination it was found that the right leg had been completely severed from the thigh through the knee-joint. The skin of the lower third of the thigh was extensively bruised and lacerated, and the muscles exhibited torn and bruised ends, blood being extravasated into the sheaths. The femoral artery was occluded apparently by torsion, and was seen lying free in the remnant of Hunter's canal. The sciatic nerve was also ruptured. The patella was situated in the stump, and the ligamentum patellæ was not ruptured, but had been detached from the tibia by the separation of a small portion of the tubercle; the crucial ligaments also were entirely separated from their femoral attachments and the lateral ligaments of the joint were completely torn away. The lower end of the femur was thus completely exposed, and the external and anterior surface of the bone had been denuded of periosteum. Under chloroform Dr. Ware performed immediate amputation of the thigh at about the junction of the upper two-fifths with the lower three-fifths, the extensive laceration and bruising of the skin and muscles rendering a high operation imperative. The boy bore the operation well and quickly rallied from the shock. Two days after the accident he was playing with his toys, but was extremely bad tempered. The wound healed by first intention and recovery was uneventful.

Remarks by Dr. WARE.—On examining the leg, which was brought to me after the operation, I found that the semilunar cartilages remained *in situ* and that the crucial ligaments maintained their attachment to the tibia. The long external lateral ligament was still attached to the fibula and at the point of separation from the femur had denuded an adjacent extensive surface of bone of its periosteum. On dissection no fracture of the tibia or fibula could be detected, and there was no epiphysial displacement; the insertions of the hamstring muscles also remained uninjured. The accident, which as far as I can ascertain is rare, appears to have been caused in this wise. The boy was riding behind a four-wheeled cab when his thigh became impacted between the axle and the spring. In his struggles to extricate himself his leg became entangled in the spokes of the wheel. The cab was moving at a medium pace and the boy's thigh being firmly fixed under the spring and his leg forcibly wrenched by the moving wheel his limb was torn off at the knee-joint. I am indebted to Mr. H. B. Robinson for kind permission to publish this case.

CROMER COTTAGE HOSPITAL.

TRAUMATIC ANEURYSM; LIGATURE OF THE AXILLARY ARTERY; REMARKS.

(Under the care of Mr. FENNER.)

ALL cases of wound of the larger arteries are of interest, especially when pressure or other treatment has proved successful in arresting primary hæmorrhage but a traumatic aneurysm has developed at a later date. Mr. Fenner's case presented signs of the circumscribed variety of traumatic aneurysm, and the treatment—that of ligaturing the main artery above and near to the swelling—was successfully adopted. It is possible that application of the ligature in the position of the third part of the axillary artery may have deprived the arm of the use of the superior profunda artery as a collateral channel, and so caused the additional deficiency in the blood-supply to the parts beyond, which led to the gangrene of the middle finger.

A strong, able-bodied man, aged thirty years, was assisting on Nov. 29th, 1893, in the operation known as "pig-sticking," when his foot slipped and he fell upon the point of a knife. The knife pierced the outer aspect of the right arm in its middle third. Profuse hæmorrhage followed, but the man walked through the town, a distance of half a mile, bleeding copiously. When seen he was partially collapsed. The bleeding ceased upon removing a handkerchief which had been wound tightly round the arm below the wound. The wound was cleansed and dressed antiseptically, and the arm was bandaged from the hand upwards. The patient was sent home, but at night severe bleeding again set in. The wound was plugged and a sedative given. The following night hæmorrhage again occurred, which renewed plugging easily arrested. The wound did well for five days, but on the sixth day moderate bleeding again occurred. No further hæmorrhage took place, and the wound gradually healed. The patient was kept under careful observation. At this time, beyond pain and difficulty in flexing the forearm owing to the constrained position, no loss of power or sensation was discernible. On Dec. 20th the patient complained of a small swelling on the inner aspect of the arm, at the posterior margin of the biceps muscle. Pulsation, with a distinct thrill, was apparent. The tumour was about the size of a pigeon's egg, and was opposite the seat of the original wound, but on a higher level. In a few days a double bruit was distinctly audible, and all the symptoms of an aneurysm were present. The tumour increased rapidly in size both upwards and downwards, soon occupying the whole of the inner and anterior aspect of the upper arm; the thrill was most intense, and could be distinctly felt even, on the outer aspect of the arm. Œdema of the hand and loss of sensation of the fingers, and especially of the middle finger, supervened and increased rapidly. As a preliminary measure the effect of distal pressure was tried. The elbow was flexed, pads were placed in the flexure of the joint and over the tumour, and the arm was fixed by an elastic bandage in this position. Distinct diminution of size, as evidenced by measurement, was at first apparent, but œdema increased. The thrill extended upwards to the axilla, and the pain was so intense that it was deemed advisable to deligate the artery in its third part. The operation, which took place on Jan. 12th, 1894, was somewhat difficult owing to the enormous distension of the axillary vein, which completely enveloped the artery. One strong carbolised catgut ligature was used; the nerves of the brachial plexus were clearly seen and easily kept clear of the dissection. Pulsation immediately ceased in the tumour. Thirty hours after the operation a dusky discolouration was noticed on the terminal phalanx, and another at the base of the thumb on the palmar aspect, although every precaution had been taken to prevent a possible onset of gangrene. The wound did not heal by first intention, although maintained aseptic throughout, but gradually healed by granulation and was fully healed by Feb. 12th. In spite of all precautions, the distal phalanx gradually passed into a state of dry gangrene, a large bulla forming

upon the thenar eminence. On Feb. 8th the bulla burst, discharging a thin, sanious fluid; a large slough, including the small muscles of the thumb, gradually came away, subsequently exposing the deep flexor tendons of the thumb and index-finger and the bare index metacarpal bone. On March 9th sensation was almost in abeyance over the palm and fingers, back and front, but over the dorsum of the hand as far as the metacarpo-phalangeal articulation it was fairly good. The thumb up to the line of demarcation had sensation almost unimpaired. Above the wrist sensation was normal. Flexion at the elbow and wrist was almost unimpaired, although the range of movement was limited owing to the prolonged constrained position. Power of flexion of the index-finger was lost, and of the remaining fingers it was present but modified; the power of extension was also modified. Massage of the arm and forearm, with frequent application of static electricity and the interrupted current, was persevered with. On the 15th the gangrenous process having entirely ceased and free circulation being evidently established, the thumb was amputated through the metacarpo-phalangeal joint, and, the patient being under an anæsthetic, advantage was taken to forcibly flex the elbow and break down adhesions. The amputation flaps maintained a healthy appearance, and the wound gradually healed, the large ulcer at the base of the thumb granulating healthily and quickly. On May 1st the man returned to work and was able to use his hand at his ordinary occupation. He has continued at his work, and, beyond the inconvenience of the stiffened index-finger, is at no disadvantage.

Remarks by Mr. FENNER.—Deligation of the axillary artery for traumatic aneurysm is sufficiently rare to warrant me in publishing this case. The only alternative would have been to open the aneurysm, turn out the contents, and attempt to tie both ends of the artery, an operation fraught with great danger to the limb and to the patient in his then weakened condition.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

TWO CASES OF STONE IN THE BLADDER WHERE PRIMARY UNION OF THE BLADDER WOUND OCCURRED AFTER SUPRA-PUBIC LITHOTOMY; REMARKS.

(Under the care of Mr. F. PAGE.)

IT is generally agreed that in the ideal operation for removal of a stone from the bladder by the supra-pubic route primary union of the wound is required. Much attention has therefore been given to plans of suturing which promised success. The suggestions are numerous, embracing the questions as to the best material for sutures, whether they shall be put into the vesical wall or not, whether the abdominal wound shall be sutured or left open, and if sutured, whether the various layers shall be united separately or included in one with the bladder wall. It is said that success has been obtained by these and by other methods whether drainage was employed or not, whilst primary union of the bladder wound without suturing has been obtained more than once. As a matter of experience, it is most important, before using any sutures, to gauge accurately the condition of the bladder wall and urine, and the surgeon who employs the method of wound treatment best adapted to the particular case and follows no rigid rule will obtain the best average of successes. We have seen the most disastrous results follow the use of sutures—cellulitis, peritonitis, septicæmia, and pyæmia,—and are therefore somewhat chary in recommending them unless the bladder and urine are almost or quite natural and the former not bruised by the stone when removed from it. For the notes of these cases we are indebted to Dr. D. N. Jackson, house surgeon.

CASE 1.—A man aged thirty years was admitted to the infirmary on June 10th, 1894, with symptoms of stone in the bladder of seven years' duration. The urine was thick and offensive and contained pus. The patient micturated with considerable pain every quarter of an hour. On June 12th a uric acid stone weighing two ounces and five drachms was removed supra pubem. No suture was introduced into the bladder wound; but the skin and muscles were sutured with fishing gut, only a small portion of the wound at its lower extremity being unclosed. A soft catheter was secured in the bladder. Two days after the operation, owing to a slight urethritis, the catheter had to be removed, and the patient was taught to pass it for himself, which he did every two hours at first, and at lengthening periods till the wound was soundly healed. On the 21st urine was passed voluntarily, but the use of the catheter was not wholly discontinued till July 2nd.

CASE 2.—A youth aged eighteen years, who had had symptoms of stone for five years, was operated upon on June 23rd, 1894, and a large mulberry calculus weighing one ounce and seven drachms was removed supra pubem. Similar treatment was adopted in this case as in the last, with similar result, no urine at any time escaping in either case from the wound after the operation.

Remarks by Mr. PAGE.—The point to which I wish particularly to direct attention in these two cases of supra-pubic lithotomy is that, though the bladder wound was not sutured, no urine escaped through the wound during the progress of recovery. It all passed by the urethra. I have succeeded in obtaining the same result in a child on more than one occasion without suture of the bladder, but I have never before quite succeeded in the adult. In the first case the urine was offensive at the time of operation, and the stone was large and of an awkward shape. The second case was a more favourable one, the urine being quite sweet, and I do not see why similar results should not be generally obtained.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Illustrations of some Modes of Death from Ovariotomy.

AN ordinary meeting of this society was held on Tuesday, Jan. 8th, the President, Mr. J. HUTCHINSON, F.R.S., being in the chair.

In opening the meeting the PRESIDENT made the following announcement. That with a view to extending the scope of the discussions and the usefulness of the society the Council had arrived at the following resolutions. 1. That papers accepted for reading be thereby accepted for publication either in the Transactions or in the Proceedings, as may be determined by the Council subsequently to the reading. 2. That the Transactions be published in three parts during the year (viz., on Feb. 1st, May 1st, and Aug. 1st, as well as annually), and that it be optional to the Fellows in which form they receive the Transactions. 3. That papers be issued separately (for sale by the society only) as early as possible after the issue of the part, at a price to be affixed to each. 4. That the papers be printed before discussion, and be obtainable (in proof) on application at the society's rooms. 5. That attention be drawn to the fact that the President may direct an author to read his own paper. 6. That some of the ordinary meetings be devoted to discussions and demonstrations on special subjects, to be introduced by a short paper or papers by Fellows of the society or others at the request of the Council, and that a small standing committee be appointed to arrange for these meetings and to draw up regulations respecting them.

Dr. JOHN D. MALCOLM read a paper on Illustrations of some Modes of Death from Ovariotomy. After referring to certain instances in which he had not operated on patients having tumours which he believed to have originated in ovarian tissue, Dr. Malcolm read the histories of all the cases of death from ovariotomy that had occurred in his practice to date. These were as follows: 1. A dermoid tumour ruptured into the bowel. At the operation a portion of the tumour inseparable from the sigmoid flexure was left on it, and fixed outside the peritoneum through an opening made for the purpose in the left groin. Symptoms of obstruction of the bowel began on the third day, after which the groin wound became offensive. Death occurred on the sixth day. After death there was no sign of general peritonitis. There was an obstruction formed by an adhesion of the healthy small bowel to the ovarian pedicle. This was on the right side. On the left side there was suppuration round the groin wound, limited by peritoneal adhesions. 2. A ruptured tumour, with papilloma fungating in and on it. About a year before Dr. Malcolm saw the patient her abdomen had

been explored by another medical man, by whom the tumour was diagnosed as malignant, and no attempt was made to remove it. Complete ovariotomy was performed by Dr. Malcolm. Symptoms of partial obstruction of the bowels began on the ninth day after the operation and gradually increased. An attempt at relief by operation was made on the thirty-fourth day. The obstruction was found to be due to an immense dilatation with convolution and adhesions of the sigmoid flexure. The portion of the pedicle beyond the ligature had sloughed, but there was no suppuration in the peritoneal cavity. The patient died fourteen hours after the second operation, and no evidence of malignant disease was found after death. Death was attributed to the condition of the sigmoid flexure rather than to sloughing of the pedicle. 3. A malignant solid ovarian tumour of the consistence of blood-clot and distinctly fluctuating. It extended from the pelvic floor to above the costal margins, was universally adherent, and was mistaken for a cyst by all who examined the patient. The operation was incomplete, and death occurred from shock. 4. Two ovarian cystomata and a uterine fibroma. These were removed, and death took place on the twelfth day from clotting in the iliac vein. Symptoms of this complication existed for about six hours. 5. A ruptured colloid ovarian tumour. The patient was sixty years of age. After death it was found that she had numerous hard atrophied fibroids in the uterine walls, and the uterine cavity was dilated. Many of the fibroids bulged into the cavity, but the outer surface of the uterus was smooth above. The physical signs and history suggested that the enlargement of the uterus was due to malignant disease. Discharge from the uterus ceased on the fourth day after the operation, high fever followed, and the patient died on the sixth day. 6. Two ovarian cystic tumours raising the uterus and peritoneum completely out of the pelvis. Dr. Malcolm made an exploratory operation and a diagnosis of malignant uterine growth in November, 1891. Slow enlargement followed, but there was no clinical evidence of malignancy. A second operation was therefore performed in October, 1893, the tumours with the body of the uterus, forming one mass, being completely removed. Death followed from shock. No post-mortem evidence of malignant disease was found. Dr. Malcolm remarked that it was a special satisfaction to him that he had not to record any case of death from slipping of a ligature or from septicæmia conveyed to the patient at the time of operation and terminating within three days. He said he had recorded these cases fully because the more clear the records of the way in which death follows operations performed the more likely is it that surgeons will be able to prevent a fatal issue in similar cases in the future, and he therefore ventured to hope that these histories might be useful to others and might give rise to an instructive debate. He concluded by suggesting for discussion the following propositions, which he thought to be in accordance with the present knowledge of the subject, and to be supported by the cases related. 1. That in dealing with ovarian tumours it may be impossible to make an exact diagnosis as between the malignant and the benign, and it may be impossible to remove successfully even a non-malignant growth. Hence that the selection of cases for operation, which many men profess not to make, is one of the most difficult and perhaps the most important duty of the surgeon in this branch of his art. 2. That septicæmia is the most common danger of abdominal surgery, but that septicæmia in uncomplicated cases of ovariotomy is preventable by the use of antiseptics and by care; whereas in certain complicated cases its avoidance is difficult, and may be impossible. 3. That functional and mechanical disturbances of the bowels are the special dangers of abdominal surgery. The circumstances under which operation in difficult cases should be undertaken or refrained from were briefly considered.

The PRESIDENT, in thanking Dr. Malcolm for his paper, referred to the time before antiseptics were invoked in the prevention of septicæmia, when very different results were obtained, and commended the frank honesty with which he had recorded his fatal cases.

Mr. ALBAN DORAN said that the object of recording fatal cases at the present time was very different from that of thirty years ago, when the operation was then on its trial. Thanks to Sir Spencer Wells and a few others ovariotomy was now firmly established, and the object of investigations like the present was to answer the question, How is it that cases are ever fatal? He divided the causes of a fatal result into preventable and unpreventable. In the former category he placed hæmorrhage, as from the slipping of a ligature from the pedicle; general oozing, he thought, was fatal not from loss of blood, but from offering a favourable nidus for septic processes; sepsis from within, as from the escape of fluid from a ruptured cyst during the operation: and sepsis from without. Among unpreventable causes he instanced the bronchitis which frequently supervened in elderly women, due possibly to the anæsthetic, the impossibility of completely removing malignant tumours, and occasionally dermoids.

Dr. HANDFIELD JONES asked whether Dr. Malcolm did not consider the condition of the heart as exerting a most important influence in the result of a case, and he instanced two cases in his own recent experience, one in a pallid woman of thirty years of age with a very feeble pulse, who after the easy removal of a small solid tumour never rallied, but died of cardiac failure; the other, a woman who at her own urgent request was operated upon on the sixth day after an attack of influenza, and also died of cardiac failure; contrasting with these the case of a delicate, tuberculous-looking woman who passed safely through an attack of pneumonia of the right lung and an obstruction of the bowel which necessitated reopening of the abdomen. He thought valuable information as to the advisability of proceeding with a complicated operation might be obtained by examining the patient's pulse during the operation, and dwelt upon the difficulty of forming any opinion as to the extent of infiltration or adhesions before the abdomen was opened. Referring to anæsthetics, he thought ether was liable to produce bronchitis in old people.

Dr. CULLINGWORTH said he doubted the necessity for isolation in ovarian cases—their admission to a general ward imposed less strain upon the nursing, did not involve so much delay in operating upon a number of patients, avoided the development of self-consciousness in the patients themselves, and detracted less from the general interest of the nurses in a large hospital, while it made no difference to the welfare of the patients. He recommended the routine employment of purgative measures, and expressed the opinion that exploratory operations could not be performed with impunity even in malignant cases.

Dr. AMAND ROUTH referred to Dr. Malcolm's publication on what was since called "pseudo-ileus" in 1887, and noticed with satisfaction that none of the cases referred to since that date had died of the condition.

Dr. MALCOLM, in reply, admitted the difficulty of determining whether a heart was strong enough to overcome complications which could not be foreseen, though he recognised the state of the heart as having an important influence on the case. Though he did not see great objections to ovarian cases being put in general wards, he thought a death after operation would have a demoralising effect on others who were waiting their turn.

OBSTETRICAL SOCIETY OF LONDON.

Peritonitis: its Nature and Treatment.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 2nd, Dr. G. E. HERMAN, President, being in the chair.

Dr. JOHN SHAW read a paper on Peritonitis: its Nature and Treatment. He gave notes of two cases, the one of acute peritonitis of undoubted septic origin, the other presenting the symptoms of obstruction of the bowels following ovariotomy. In the first case death seemed to be hastened by a dose of opium, presumably from its effect in diminishing the elimination of the poison; and in the second case the strong presumption was that death was primarily due to the absorption of poison from the gastric mucous membrane. With this experience, Dr. Shaw, regarding the fatal issue as essentially toxic in origin, determined on a plan of action in any succeeding case which might present itself. Two such cases were briefly described where the treatment was successfully carried out. The course of action indicated was—(1) to limit as far as might be the formation of the poison; (2) to eliminate it when formed as quickly as possible, or at least to destroy it; and (3) to support the patient's strength during these processes. To secure these ends Dr. Shaw advocated the application of warm antiseptic compresses to the abdomen; the provision in suitable cases of drainage from the peritoneal cavity; persistent effort to evacuate the bowels, and pending this, as far as might be, the disinfection of the intestinal contents and the

regular washing out of the stomach; and hypodermic injections of strychnia and digitaline, and the inhalation of oxygen.

Mr. DORAN said that none of the cases were simply instances of peritonitis. The first was septicæmia after disturbance of a suppurating focus. There was little evidence that the dose of opium mentioned did much harm. In the second case the main symptom was obstruction; the abdomen had been opened a few hours after operation and the pedicle fixed to the parietes, strain being designedly put on the broad ligament. In the third case the clinical symptoms mainly indicated obstruction. Clear serum escaped in quantities through the tube. The appearance of clear serum was an indication for removing the tube, otherwise the flow might go on indefinitely. The fourth case was very complicated, bronchitis set in, the omentum prolapsed on the fifth day, the next day the wound was opened up and sloughy omentum removed, and a valvular communication between the peritoneum and surface existed. Mr. Doran had found that whenever flatus accumulated and did not come away spontaneously a turpentine enema answered well. After the confined flatus escaped other bad symptoms usually disappeared. He had recently observed that in a case under his care where bronchitis set in, the grave pulmonary symptoms abated and ceased when the flatus came away. Warm water and bicarbonate of potassium acted well in clearing the stomach.

Dr. HORROCKS objected to the title of the paper. He did not think it correct to speak of peritonitis as a toxæmia. Cases of peritonitis varied from the trivial to the rapidly fatal. The difference between different cases depended on the cause of the inflammation. Bacteriology showed that certain microbes set up a mild inflammation, others a virulent one. Dr. Shaw thought that death was due to absorption of putrefactive material from the stomach and bowels. He (Dr. Horrocks) thought the mode of death indicated disturbance of the nervous system through the solar plexus. Again, Dr. Shaw seemed to deprecate the use of opium in peritonitis; but opium and its derivatives were the very best remedies in certain forms, such as what used to be called "traumatic peritonitis." Dr. Horrocks mentioned a case of rupture of the uterus where opium had been of great service. Dr. Shaw had quoted a statement by Mr. Lawson Tait to the effect that if in cases of peritonitis the bowels could be opened the patient would recover, but if not she would die. This statement was incorrect. It was often a most important question whether to disturb the bowels or not. He agreed with Mr. Doran that it was very important to get rid of flatus, particularly after abdominal section, on account of the wound being liable to be burst open.

Dr. AMAND ROUTH thought it was clear that the last three cases were not cases of peritonitis, but of paralysis of the bowels ("pseudo-ileus"), the result of handling. He alluded to the remarkable fact that, though the bacterium coli commune was perfectly harmless in health, it became virulent when the bowel was in any way diseased, and was then capable of passing out of the bowel into the blood and tissues and of causing septicæmia, including septic peritonitis. Olshausen and others believed that this happened as a result of this "pseudo-ileus." He (Dr. Routh) agreed with this, and thought it was possible that a sapræmia arose in some cases from absorption of the products of the bacilli, the patient escaping the more fatal septicæmia if treatment were in the meanwhile successful. He mentioned the treatment now advocated in many cases where septicæmia had not become established of reopening the abdomen and making free incisions into the bowels and evacuating their contents. He thought that, as certain lengths of the bowel might be in a state of tonic contraction while the rest was exhausted, it was not wise to give strychnia alone, but that it should always be combined with atropine.

Mr. MALCOLM dealt with the question of arterial tension as a result of operations, abdominal operations among others, and objected to Dr. Shaw's theory that the contraction of the vessels found in the febrile state was a "revolt of the system against the circulation of impure blood." The view that the hardness of pulse in this state was due to deficient kidney secretion was not consistent with Mr. Malcolm's observations. The kidney secretion was of course not diminished, but very greatly increased, during fevers, and the diminution of the watery constituents, which he presumed was referred to by Dr. Shaw, seemed to be greatest immediately after an aseptic operation rather than on the second or third day, when the pulse changes were most marked. He (Mr. Malcolm) believed that during the healing of a wound contraction began in the peripheral vessels, and that it increased in intensity, and extended from these small vessels to larger ones in proportion to the severity of the inflammatory fever, reaching the maximum of extent and intensity on the second or third day. About this time distension of the bowels might begin, producing by increased mechanical opposition still further reflex contraction of the vessels throughout the body, and thus might altogether deprive the tissues of their blood-supply and be the actual cause of death. He criticised the description of the cases in the paper as peritonitic, and considered that when the patient was constantly sick absorption from the stomach was in abeyance, and that the occurrence of such absorption meant that the patient was getting better. He was of opinion that, where the intestines were distending and the patient was sick, food which was rejected did more harm than good.

Dr. GIBBONS wished to add his testimony to that of Dr. Shaw as to the great value of subcutaneous injections of digitaline and strychnia, and he would also include atropine, in the treatment of peritonitis. He mentioned a case where this method had, he believed, saved the life of a patient. He considered it infinitely superior to extra stimulation by alcohol.

The PRESIDENT agreed with the speakers who had said that the title of Dr. Shaw's paper was too comprehensive. He (the President) thought that some such title as the "Advantage of Washing out the Stomach in cases of Peritonitis" would have better denoted the scope of the paper. He thought it was now established that peritonitis was produced by micro-organisms. The poisoning they brought about was only an effect of the micro-organisms, but not the essential cause of the disease. He was quite prepared to accept Dr. Shaw's statements as to the benefit of washing out the stomach in peritonitis when vomiting was copious. He did not accept Mr. Lawson Tait's statement that peritonitis could be prevented by purging the patient; but he quite believed that if the bowels could be got to act the patients were the better for it. Mr. Treves had shown that in those cases of peritonitis in which diarrhœa was present the mortality was less than in those where there was constipation. The treatment of peritonitis was according to its cause. If it depended on disease of the stomach or bowels it was important that the diseased part should be kept at rest, and therefore opium was indicated to restrain peristaltic movement; but when peritonitis arose from disease of the uterus or its appendages, the alimentary canal being healthy, there was not the same utility in giving opium. It was in such cases beneficial in relieving pain, but in no other way.

Dr. JOHN SHAW, in reply, acknowledged the justice of the criticism on the title of his paper. He explained certain points which he thought had been misunderstood by the speakers.

The following specimens were exhibited:

Dr. CULLINGWORTH: Cystic Enlargement (probably Pyosalpinx) of Tube.

Dr. STEVENS: Fœtus in which the Urethra was absent, with other abnormalities.

Dr. ILOTT: Fœtus Papyraceus.

Dr. AMAND ROUTH: Cancerous Uterus and Parovarian Cyst removed together per vaginam.

Dr. DES VŒUX: Circumscribed Clot in Placenta.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Jan. 3rd, the President, Mr. G. EASTES, being in the chair.

Mr. G. C. WILKIN showed a boy aged ten years with a Deflexion of the Nose. There was a history of a blow on the nose two years ago. When he first came under observation there was a marked deflexion of the nose to the right. Grant's septal splint was at first used, but was found to increase rather than reduce the error. A splint was made consisting of a band fitting round the head, from which two metal rods fell, one on either side of the nose, carrying a movable plate, which could be screwed up to any degree of pressure. This effected a considerable amount of improvement.

Mr. EDMUND OWEN showed a girl aged eleven years rom whom he had removed the upper third of one Fibula

for Septic Osteomyelitis. A new segment of fibula had been developed from the diaphysial periosteum.—Mr. MANSELL MOULLIN congratulated Mr. Edmund Owen on the excellence of the result obtained by early operation and inquired whether it had been possible to ascertain in the present instance whether the inflammation had begun under the periosteum or between the shaft and the epiphysis. Of late the opinion had gained ground that in the majority of instances it commenced in the latter situation, where the blood-supply was most abundant, where the tissues were softest and most delicate, and where a strain falling upon the bone would affect it most severely, and that the subperiosteal mischief was secondary.

Mr. MOWER WHITE showed a male patient aged sixty-five years who had a Tumour of a doubtful nature involving the adductor muscles of the left thigh. The tumour was first noticed seven weeks previously and was said to have been then less defined and rather smaller than at present. No cause could be assigned for it; there was no history of venereal disease, it had never been painful, and it had scarcely interfered with progression. Mr. White first saw the patient five weeks ago; the tumour was then firm and inelastic. He thought that it was either a gumma or a sarcoma, and at once commenced antisyphilitic treatment and had continued the same up to the present time. The changes which the tumour had undergone during this period were that it had slightly increased in size, that its borders had become better defined, and that it had become elastic. Now it presented the following characters. It was oval, measuring four inches and three-quarters in its longest axis; it was movable, but was rendered fixed by the voluntary contraction of the adductor muscles; it gave distinct fluctuation almost to its borders, which were, however, firm and inelastic. There was an enlarged lymphatic gland attached to its upper end, and the inguinal glands were larger than natural; one or two glands could also be felt in the fore part of the iliac fossa. In view of the above facts Mr. White thought that the diagnosis of gumma must now be given up, and that the changes which the tumour had undergone under observation were scarcely consistent with sarcoma. He suggested that the mass was a chronic abscess, and that its origin was probably tuberculous. He had arranged to investigate its nature by operation and would inform the society what it proved to be.

Dr. CAGNEY showed cases of Raynaud's Disease and Muscular Atrophy and of Tabes.—In reference to Dr. Cagney's case of Raynaud's disease, Dr. JAMES TAYLOR said it was, in his experience, unusual for the symptoms of Raynaud's disease to be aggravated by a higher temperature. This patient did not seem to suffer from the intense pain which in so many cases followed a change of temperature. He ventured to think that in the case mentioned by the President there was present some disease of the spinal cord determining the vaso-motor symptoms and also the peculiarly perverted sensibility. The condition in which cavities were present in the cord—syringomyelia—was accompanied by vaso-motor symptoms, muscular atrophy, and loss of sensibility for pain and temperature. In regard to Dr. Cagney's case of "muscular dystrophy," Dr. Taylor thought it was a pity to apply such a term to this case. The term was now so widely used as descriptive of cases of perverted muscular nutrition without change in the central nervous system—cases of pseudo-hypertrophic or idiopathic muscular atrophy—that its application to cases other than those was apt to be misleading.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Stations for the Bacteriological Examination of Suspected Cases of Diphtheria.—The Treatment of Epilepsy.—The Rôle of Alcohol in Heart Disease.

A MEETING of this society was held on Jan. 4th, the President, Dr. BANNING, being in the chair.

A subcommittee of the society was appointed to report on the advisability of petitioning the Local Government Board to establish Stations for the Bacteriological Examination of Suspected Cases of Diphtheria.

Dr. COLMAN read a paper on the Treatment of Epilepsy. After referring shortly to many barbarous methods formerly in vogue in the treatment of the disease, he referred to the importance of preventing fatal accidents during the fits, such as choking from vomiting, and suffocation from the patient turning over and burying his face in the pillow. He recommended the use of pillows specially constructed, either chain-wire pillows, or a cheaper one covered with open canvas and stuffed with cocoanut fibre. With regard to the general treatment, occupation of mind and body, with as little worry or responsibility as possible, plain simple diet, and scrupulous attention to the regular action of the bowels were the most important things. The greatest effect, however, was produced by drugs, and of these the bromides stood high above all the others. Nearly a ton and a half of the various bromides were consumed annually at the National Hospital for the Paralysed and Epileptic. Dr. Colman considered that there was more effect produced by considerable doses than by small ones administered frequently. The drawbacks, such as the development of acne and the loss of flesh, which occasionally accompany the treatment by bromides were considered and their appropriate treatment indicated. Borax was considered as the drug which next to the bromides had the most influence in controlling the fits; but it is, as a rule, much less powerful and resembles bromide often in giving rise to eruptions and other unpleasant symptoms. He referred briefly to the question of excising portions of the cerebral cortex in idiopathic epilepsy when the fits began locally, but did not think the results obtained at present very encouraging.—The PRESIDENT referred to the starvation treatment of epilepsy.—Mr. BOXTON reported a case which had benefited after the use of lacto-phosphate of manganese, although it had previously resisted the action of bromide.—Dr. ALDERSON considered that the epileptic seizures were more frequent in the day than in the night, and so disagreed with the practice of giving a large dose of bromide at bedtime instead of a medium one frequently. Although having great faith in bromide, he had greater confidence in abstinence from meat, especially beef, and also in the freedom from worry and anxiety.—Dr. SHUTTLEWORTH also referred to the benefits following the starvation treatment of the disease. He had treated cases with borax, but had found it inferior to bromide, and now he advocated the combination of the two remedies. He referred to the occurrence of alopecia after the use of borax.—Mr. MENZIES referred to the old Scotch practice of burning a cock's comb and the parings of the patient's nails at the spot where the first seizure occurred.—Mr. BIDWELL related a case of focal epilepsy in which he had removed a portion of the motor area of the cortex. The patient now (two years and a half after the operation) was nearly entirely free from fits.—Dr. C. POPE referred to cases of Ménière's disease which were allied to epilepsy, and in which the patient was attacked with vertigo and fell down. These cases were not affected by bromide.—Dr. COLMAN replied.

Dr. CHAPMAN read a paper on the *Rôle* of Alcohol in the Treatment of Heart Disease. While recognising the value of alcohol in appropriate cases, and on particular occasions, he protested against its prescription in cardiac cases as a matter of routine. It was shown that in some cases alcohol was absolutely harmful, and in none should the patient be left to decide as to the amount and frequency of the dose. In fact, he considered that some cases of failing heart were more benefited by purging or bleeding than by stimulation.—Dr. SYMONS ECCLES referred to the existence of dilatation of the left ventricle in cases of neurasthenia, and in such cases he found that the action of alcohol was advantageous, but of course its use must not be abused.—Dr. C. POPE drew attention to the use of the tincture of cactus in cases where the heart was beating forcibly, and which, therefore, were unsuitable for alcohol. He considered that the drug was of value.—Dr. CHAPMAN replied.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Municipal and Sanitary Administration. — The Limits of Infection in Phthisis.

A MEETING of this society was held on Dec. 17th, Mr. S. R. LOVETT, President, being in the chair.

Dr. T. M. LEGGE read a paper on Some Points of Difference between English and Continental Methods of Municipal Sanitary Administration based on personal observations during several special visits to Copenhagen, Christiania, Stockholm, Brussels, Paris, Berlin, and several other French and German towns. There were, he considered, many things in which we should do well to imitate their more perfect

methods, remembering that most of their shortcomings were owing to the exigencies of military defence, the want of special public health legislation, and the subordination of the sanitary to the police service, which was most complete in France. In Germany the *Stadt* or *Kreis Physikus* held a position similar to that of the medical officer of health of a large urban or combined rural sanitary district here. In Scandinavia the sanitary services were highly organised, but the duties of the medical officer were too much for any one man, even with an ample staff of expert assistants. He was also public analyst, registrar of births and deaths, medical assessor to the law courts, inspector of schools, asylums, factories, &c., and had the supervision of vaccination, prostitution, &c. Not only infectious but nearly all preventable diseases were notifiable, the schedules comprising from twenty to twenty-five, and the forms were models of comprehensiveness, giving on a post-card a mass of facts likely to aid in tracing and checking the spread of the disease. In Norway the Contagious Diseases Acts had been repealed, and notification strictly enjoined instead, but with unsatisfactory results. Except in Brussels sulphur fumigation had long been abandoned, spraying of walls and ceilings and washing floors and furniture with sublimate solution (1 in 1000) being substituted, operations which, not occupying more than an hour, rendered provision of temporary accommodation superfluous, and no ill results had ever been observed. In Berlin, however, should the sublimate be objected to, the walls were rubbed with bread and then saturated with a 5 per cent. carbolic acid solution. All clothes and bedding were disinfected by steam, and in Denmark even villages had their steam ovens, Reck of Copenhagen supplying a very efficient apparatus complete with boiler and fittings for £63. For ambulance arrangements no city could compare with London, but the most perfect isolation hospital was that at Stockholm. In Germany systematic revaccination had now practically stamped out small-pox. School hygiene received the fullest attention, the children being inspected every fortnight by a medical man and a dentist and leaflets &c. on the elements of sanitation, infectious diseases, and first aid freely circulated. Public slaughter-houses, without which a complete inspection of meat was not possible, were very general, those at Berlin being simply perfect. Public water-supplies were in the chief German and northern capitals examined every week, not only chemically, but bacteriologically; and while Stockholm rejoiced in a lake water of almost absolute purity, at Berlin all waters yielding 100 colonies to the cubic centimetre were condemned, and since Koch's discovery that the green algoid film which formed on the surface of a sand filter had alone the power of arresting bacteria, the water that had passed through a bed within twenty-four hours after the renewal of the surface had been rejected, while all filters were vaulted over as a protection against frost. The water carriage of excreta was adopted in Brussels, Berlin, and all the larger towns of Germany. Pails were still used in the Scandinavian capitals, and both systems existed in Paris. The condition of the Seine below Paris and of the Senne near Brussels was inexpressibly foul, but the purity of the Spree at Berlin was remarkable. The entire sewage of that city was treated by irrigation and filtration on 12 000 acres of farms, conducted with the highest skill and with military precision. What was once a sandy waste with a few stunted pines was now a vast garden yielding heavy crops of corn, roots, grass, vegetables, and fruit, and studded with villas, cottages, and public institutions, populations enjoying the best of health.

Dr. RANSOME (Manchester) then read a paper on the Limits of Infection in Phthisis, in which, while freely admitting the inoculability and, under certain conditions, the communicability of tuberculosis by inhalation or by ingestion, he maintained that there was at present a tendency to ignore those conditions which were essential to infection and to raise out of the mere fact of its communicability a scare which was cruel, useless, impracticable, and calculated to disorganise family and social life. A recent writer had demanded that phthisical patients should not only be forbidden to marry, but should be excluded from churches and all places of public resort, be isolated at home, and, in fact, shunned and treated as lepers. The communicability of phthisis had long been a popular belief in Southern Europe, and had had its adherents here and elsewhere, but it had received its greatest impulse from the discovery of the bacillus by Koch and the statistical researches of Cornet. Dr. Ransome had, however, constantly maintained that it was a grave error to ignore the conditions without which infection was scarcely possible. He had shown that there were in all large towns infected areas, constituted such by dampness, want of air and light, with overcrowding, &c. He had even known persons in whom the disease remained in abeyance so long as they resided as patients or as servants in a Consumption Hospital, but was rekindled soon after their return to their homes in the city. Hirsch had pointed out that in Syria, Egypt, and Algeria the nomad Arabs were exempt, while the inhabitants of towns suffered; and in our own country agriculturists were freer than the town population, while fishermen enjoyed the greatest immunity. He and Dr. Delépine, and subsequently Dr. Heron, had carried out experiments which tended to show that, while dried sputa retained their infectivity for long periods in darkness, exposure to air and light soon rendered them inert. He would, of course, enjoin the careful disposal and destruction of the sputa, but far more would he insist on the freest light and ventilation, remembering that the reduction in the death-rate from phthisis, representing a saving of 30,000 lives per annum, was wholly due to improved sanitary conditions. Drs. Seaton, Whitelegge, and Willoughby, Mr. Shirley Murphy, and others took part in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Cholecystotomy. — Double Optic Atrophy. — Sarcomatous Tumours.—Removal of the Parotid Gland.—Exhibition of Specimens.—Rectal Etherisation.

A MEETING of this society was held on Dec. 20th, 1894, the President, Mr. MAKEIG JONES, being in the chair.

Dr. SINCLAIR WHITE exhibited and related particulars of: 1. A woman on whom he had performed Cholecystotomy for severe and persistent attacks of Hepatic Colic. Repeated examinations of the fæces failed to show biliary calculi, and the attacks were getting worse. Each attack was followed by jaundice. Twenty-seven stones were removed from the gall-bladder and two were crushed in the common bile-duct. The woman made an excellent recovery, and had been free from pain since the operation. 2. A boy nearly blind from Double Optic Atrophy due to a Subdural Abscess, which discharged itself six weeks after the onset of severe symptoms through the anterior fontanelle. 3 and 4. Sarcomatous Tumours removed from the Coccyx of a woman seventy-two years of age, and the Parotid of a woman twenty-six years of age. The latter tumour had grown very rapidly and had invaded the neighbouring lymphatic glands.

Mr. RICHARD FAVELL showed: 1. A large Multilocular Ovarian Cyst containing fifty-three pints of fluid which he had removed from a woman fifty-five years of age. 2. A Piece of Retained Placenta which had caused recurring attacks of severe hæmorrhage till its removal eight weeks after confinement.—Mr. WEST JONES gave particulars of a large Gall-stone passed per anum and showed the specimen.—Dr. ARTHUR HALL showed specimens of Cystic Calculi.

Dr. KEELING showed specimens of Tubal Mole, Ovarian Dermoid Cyst, and Substance removed from Uterus four months after incomplete abortion, and gave particulars of the cases.

Mr. BERNARD STEDMAN read a paper on Rectal Etherisation. He said that, though Pirogoff employed this method fifty years ago, it was only quite recently that it had been revived by Dr. Dudley Buxton. Mr. Stedman had lately administered ether by the rectum in about twenty cases of operations about the mouth in the Sheffield Public Hospital, and so far the results had been extremely satisfactory. The method used was that of placing a vessel containing ether in water at 120° F. and conducting the vapour through a piece of indiarubber tubing to the rectum. There was little or no struggling during the administration. The disadvantage was the length of time taken to anæsthetise some patients. For several cases it was over half an hour. This could be overcome by giving ether by the mouth as well at the outset. When this was done the temperature of the water need not be above 110°, this temperature being sufficient to keep the patient under by the rectum alone when once fully anæsthetised. The after-effects in Mr. Stedman's cases were very slight. There was no sickness in half the cases, and in two or three there was a little diarrhœa with a discharge of mucus for several days.

No pain about the rectum was complained of. No marked distension of the abdomen occurred during anæsthetisation.

The President, Dr. Sinclair White, Dr. Gwynne, Mr. Dale James, Dr. Arthur Hall, Mr. Lockwood, Mr. Pye-Smith, Dr. Kite, Mr. Atkin, Mr. West Jones, Dr. Keeling, and Dr. Hargreaves took part in the discussions.

TORQUAY MEDICAL SOCIETY.

Dilatation of the Iris.—Cerebral Embolism.—Exhibition of Specimens.

A MEETING of this society was held at the Torbay Hospital on Dec. 19th, 1894, Dr. T. FINCH, President, being in the chair.

Mr. G. YOUNG EALES, hon. sec., read notes of an unusual case of Dilatation of the Iris, produced presumably by concussion of the eyeball. The patient, aged twenty-one years, was thrown off a bicycle, falling on the left side of his face, causing superficial scratches and a rather severe shaking. Examination thirty-two hours after the accident showed great but not full dilatation of the pupil of the right eye. There was no reaction to light, but slightly so to accommodation. Vision was normal for distant objects. There were no pain, no evidence of paralysis of branches of the third nerve, and no dislocation of the lens or rupture of the choroid. Recovery of accommodation was complete in four days, and reaction to light five days, after the accident. Mr. Eales drew attention to the rareness of the lesion and to the fact that the patient noticed nothing wrong with the sight till thirty-two hours after the accident.—Mr. ATWOOL had examined the eye at Mr. Eales's request, and considered the case to be one of paralysis of the ciliary nerves due to concussion of the eyeball. He had seen two cases at the Royal London Ophthalmic Hospital, Moorfields, but in each case dilatation of the pupil remained permanent.

Dr. POLLARD read notes of a case of Cerebral Embolism occurring in a woman aged sixty years, in which the rapid establishment of collateral circulation prevented the onset of softening. There were slight premonitory signs for an hour, followed by a semi-comatose condition lasting half an hour, accompanied by convulsive movements of the arms and legs, after which examination showed motor paralysis of the arm and leg, which gradually passed off, recovery being complete within six hours. Memory was defective and the patient was slightly dazed for a few days, but subsequent recovery was complete. The premonitory symptoms pointed to gradual occlusion and the localised nature of the convulsion and paralysis to irritation of part of the motor cortex supplied by the second or third branch of the middle cerebral artery. There was marked organic disease of the aortic valves.

Mr. WATSON showed a specimen of a Heart in a case of sudden death in which there was marked Atheroma of almost bony hardness of the Aorta.

Reviews and Notices of Books.

The Indian Manual of Hygiene. Being the King's Madras Manual of Hygiene. Revised, rearranged, and in great part rewritten. By Surgeon-Captain A. E. GRANT, M.B., Indian Medical Service, Professor of Hygiene Madras Medical College. Vol. I. Madras: Higginbotham and Co. 1894.

ONE of the most useful books for medical officers serving in India was the "Madras Manual of Hygiene," of which the second edition was, we believe, published in 1880. The work under notice, of which the first volume was published in the beginning of the year 1894, is upon an altogether more ambitious and comprehensive basis. We owe its author an apology for the delay that has inadvertently occurred in our notice of it. A very large number of authorities and official reports have been consulted, and no pains seem to have been spared by the author to treat the subject in a scientific spirit and to adapt his information to the special requirements of the Indian climate and the habits and customs of its people so as to make it a really useful book of reference to the sanitarian in that country. As the Professor of Hygiene at the Madras Medical College, bringing with him from Europe a good knowledge of what a western civilisation regarded as the correct principles and practice of hygiene, his Indian experience and observation afforded him the opportunity of subsequently acquiring the necessary supplementary knowledge of the East. Even a brief residence in India serves to indicate the vast differences that exist between that country and Great Britain. The newcomer soon perceives that he has a great deal to learn and not a little to unlearn also. A glance at the summary of contents of this volume will suffice to show that it would be impossible within any reasonable limits of space to go over all the subjects treated. After a long introduction, which is well worth reading, the author takes up for consideration the subjects of air, water, soil, removal and disposal of waste matter, buildings, climate, and meteorology. The properties and ordinary impurities of air and water form the subject of the first and second chapters. These are well done; the information is brought up to recent date, and includes the diseases attributable to impure drinking water, with references to the Pasteur-Chamberland and Berkefeld filters. The chapter on soil, which follows, is also good, and that on the removal and disposal of waste matter strikes us as particularly so, the subject being discussed with special reference to India. Passing over the chapter on buildings we come to that on climate and meteorology, which is very exhaustive and full of useful information not to be obtained elsewhere within the same space. The volume, which is published in India, is well illustrated and printed, and furnished with a useful index. We wish it the success it deserves, for it is highly creditable to its author, who must evidently have undertaken a great deal of laborious work in order to produce such a good and reliable Indian manual of hygiene.

Medical Nursing: Notes of Lectures given to the Probationers at the London Hospital. By the late JAMES ANDERSON, M.D., F.R.C.P. Edited by ETHEL F. LAMPORT. London: H. K. Lewis. 1894.

IT is now universally recognised that the trained nurse should be one who, in addition to the experience gained in the practical exercise of her duties, has had the opportunity of systematic instruction in the principles of anatomy and physiology, which alone can give her an intelligent interest in her daily duties. It is neither necessary nor right that she should be instructed in the details of disease and its treatment; but it is most essential that she should have some knowledge of the structure and functions of the body, and of the directions in which they may be altered and deranged, if she is to practise her profession with safety and credit. Amongst the nurse-training schools of the metropolis that of the London Hospital has long recognised this fundamental need, and for many years the duty of imparting instruction in these subjects has been placed in the hands of members of the medical and surgical staff. The little volume which Miss Lamport has edited from the notes of the lectures given by the late Dr. James Anderson, whose untimely death was a loss to medicine, enables the reader to form some idea of the plan and scope of the instruction he gave. There are fifteen lectures, the first dealing with some general observations on the Qualifications of the Medical Nurse, stated in homely and plain language. The next lecture, on Feeding the Patient, opens with practical advice and then makes clear the physiological facts concerning food and diet which underlie the subject of feeding. This naturally leads up to a description of the Function of Digestion, which, together with that of Absorption, forms the next two lectures. The Blood and Circulation and some practical remarks on their Disorders

are dealt with in Lectures V. and VI. The Respiratory System, the principles of ventilation, and the main features of diseases of the throat and lungs occupy the two following lectures, and these are succeeded by descriptions of the Functions of the Kidneys, Skin, &c. Three lectures are devoted to the subject of Temperature, Infection, and Fevers, and the final one treats of the Nervous System. No one can peruse the book without being struck with the vast amount of really useful information which Dr. Anderson conveyed within small compass, and also with the methodical manner in which he traversed the large field before him. Such lectures must have been of good service to his audience and cannot have failed to interest them. In their present form they constitute a text-book which will be of service to the probationer and one not wholly to be disregarded by him who undertakes a like duty to that which the author so well performed. For the art of elementary instruction in such a subject as physiology, and of combining this with the application of its truths to the practice of sick nursing, has seldom been so well manifested as by this valued physician and teacher, whose character and life are faithfully sketched in the memoir affixed to this volume—a memoir extracted from the last presidential address delivered to the Royal College of Physicians of London by Sir Andrew Clark, whose knowledge of James Anderson, as pupil and colleague, was deep and true.

Diseases of the Skin. By W. ALLAN JAMIESON, M.D. Edin. Fourth edition. Edinburgh: Young J. Pentland. 1894.

A WORK which has reached a fourth edition has passed beyond criticism as to its scope and the success of the author in realising the aim he had before him, and it only remains for the critic to point out how the new edition differs from the old and to briefly appraise the new material. The author claims to have made an exhaustive revision and to have almost rewritten some chapters, such as those on Lupus and Ringworm. He has added two new chapters on the Disorders of the Vascular System and the Treatment of Syphilis, and has incorporated sections on the Hygiene of the Hair and Nails, the Agency of Micro-organisms, on Darier's Disease, Hidrocystoma, Erythema Induratum, Lichen Neuroticus, Epidemic Exfoliative Dermatitis, Corns, Elephantiasis, Epithelial Cystadenoma, Sarcoma, Mycosis Fungoides, and Actinomycosis. This enumeration shows that the author is gradually extending the scope of his work in the direction of completeness, the earlier editions having never pretended to be a complete exposition of the subject even within the limits of clinical description. Three new coloured illustrations of Pityriasis Maculata, Xanthoma Diabeticorum, and Mycosis Fungoides replace respectively Lichen Verrucosus, Circumscribed Scleroderma, and Tuberculosis of the Skin, and we may say at once, much to the advantage of the present edition, that the originals of the new illustrations are probably truer to nature, and there is marked improvement in the style of reproduction. We hope that in future editions one or two more plates may be improved out of existence—notably, acne varioliformis as at present depicted. Lichen neuroticus is the name given by Unna and Duhring to the complex of symptoms which they consider represent the lichen ruber of Hebra and not corresponding, they think, to the lichen ruber acuminatus of Kaposi or the pityriasis rubra pilaris of Devergie; it seems a pity to further complicate the subject by inventing a new name.

Epithelial cystadenoma (Besnier) is the name selected by the author out of a host of synonyms for a rare affection which was originally described by Kaposi under the name of lymphangioma tuberosum multiplex, and consists of small epithelial lined cysts containing a colloid material which are embedded in the skin and project slightly.

Hidrocystoma is the name given by Robinson of New York to a rare and not very important affection of the sweat apparatus in which deep-seated sago-like grains are scattered over the face.

The article on Mycosis Fungoides is a fairly full one, and is illustrated by the description and plate of a good case of the rare form first described by Kaposi as lymphodermia perniciosa. The author, however, is in error in stating that mycosis fungoides was described for the first time in 1832 by Alibert and figured in the following year in the second edition of his Atlas. Alibert gave a plate and description of the case in the first edition of the Atlas in 1814, Plate 36, only he called it there "Pian fungoïde," and changed the name in the later edition.

It will thus be apparent that the author no longer contents himself with the exposition of the commoner forms of skin disease, but that in each successive edition he gives his readers the benefit of his widening experience in diagnosis and treatment, and we can therefore predict as much success for the present as for the past editions, on which it is in many respects an advance.

Practical Uranalysis and Urinary Diagnosis. By Dr. CHARLES W. PURDY. Philadelphia: F. A. Davis and Co. London: F. J. Rebman. 1894.

THE class of book of which the present volume is one of the latest additions has enormously increased of late years. Formerly the examination of the urine was only treated of in general text-books on medicine and surgery, and the student had frequently to search several volumes before he discovered the information he desired; but now there are many works on urology, and still more on clinical pathology. Such books are very valuable, but there seems a great tendency to an over-production. In the volume now under consideration there is a large amount of useful information collected together in a readable and convenient form, and a special effort has been made to bring out prominently the relations of the chemistry of the urine to physiological processes and pathological facts. This method is certainly to be highly commended, for it teaches not only how to detect, isolate, and determine the constituents of the urine, normal and abnormal, but also how to determine the presence of disturbed physiological processes, to detect the presence of pathological changes, and to measure the degree of both.

The book is divided into two parts. The first treats of the analysis of urine, including both the normal and abnormal constituents. The various chemical processes are well described, and the author very wisely points out in each case which method has given the most satisfactory results in his hands. The second part "aims at a concise description of the special features of the urine that indicate the presence of special pathological processes in progress in the economy, whether they be local or general, medical or surgical, together with a brief enumeration of the leading clinical symptoms of each disease, and in most cases an epitome of their nature and etiology." Dr. Purdy has accomplished his object in a most satisfactory manner and is to be congratulated on the work produced.

The book is well illustrated, and although the great majority of the illustrations are borrowed they are none the less valuable on that account.

LIBRARY TABLE.

Diagnosis, Differential Diagnosis, and Treatment of Diseases of the Eye. By A. E. ADAMS, M.D., Instructor in Diseases of the Eye in the Post-graduate Medical College, New York. London and New York: G. P. Putnam's Sons. 1894.—Each page of this little book deals with two of the principal disorders of the eye, these pairs being selected on account of their having some points of resemblance. Each

of their names stands at the head of a column consisting of brief enumerations of the leading symptoms, and capital letters are used for those features which distinguish the two morbid conditions from one another. For instance, interstitial keratitis and ulcer of the cornea are grouped together on account of the loss of vision, pain, photophobia, and circumcorneal injection common to both, and are distinguished by the former having the cornea smooth and lustreless with a white-grey opacity, and by the latter having an excavated cornea with a yellow-grey opacity. In the words of the preface, the work is "designed more especially for the active practitioner, who does not claim to be an ophthalmologist." It is, no doubt, a concise and convenient summary of ophthalmic diseases and their treatment.

Spinal Curvature and Awkward Deportment: their Causes and Prevention in Children. By Dr. GEORGE MÜLLER, Professor of Medicine and Orthopædics, Berlin. English edition by RICHARD GREENE, F.R.C.P. Edin. London: The Scientific Press, Limited. 1894.—The majority of parents who are solicitous for their children's success in life have before their minds a mistaken educational ideal, according to which too much is taught at a tender age and an ever-increasing amount of study is compressed into the school period. Dr. Müller utters an emphatic warning against thus overloading a child's mental faculties, and proclaims the need for systematic attention to physical training and the symmetrical development of the bodily form. He points out that many children are predisposed to spinal curvature by hereditary tendency and by constitutional weakness, but that far the most common cause of the deformity is the position in which writing is taught. He recommends that the seats used in school by children should allow the soles of their feet (not the toes only) to rest flat on the floor and should be provided with sloping backs. The writing-table should be well-sloped, and its edge should overhang the front of the seat. Handwriting should be upright and not slanting. The author's precepts are largely directed to the prevention of curvature; for the correction of it he recommends a variety of muscular exercises which are fully described and illustrated by engravings. His remarks and directions are practical and judicious and worthy of careful attention.

An Address on the Cultivation of the Speaking Voice. By Miss D'ORSEY, Lecturer in Elocution, King's College (Ladies' Department). London: J. Masters and Co. 1894.—An easy, distinct style of speaking and an effective delivery are accomplishments of no small value to their possessor in whatever walk of life he may be. On the other hand, an indistinct or too hasty speaker is a source of discomfort, not only to himself, but in even a greater degree to those who have to listen and perhaps may wish to learn. Miss D'Orsey's object is to call public attention to this question and to obtain a general recognition of the excellent results obtained by systematic and methodical "voice training." She is a daughter of the late Rev. Professor D'Orsey, and appears to have inherited some portion of her father's eloquence and educational attainments. The address is a short summary of the work accomplished by her in furtherance of the project.

Wintering in Egypt. By ARTHUR J. M. BENTLEY, M.D., and Rev. C. G. GRIFFENHOOFE, M.A. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1894.—This is a record of personal experience which the authors have presented in the form of a brightly written and entertaining narrative. Having arrived at Alexandria they seem to have proceeded with the least possible delay to Mena House Hotel, about eight miles from Cairo, and close to the Great Pyramid. Here their headquarters were fixed and the period of their stay was agreeably passed in excursions and sight-seeing in the neighbourhood, divers fled by expeditions to Cairo and Memphis. The work has none of the formality of a guide-book or a diary, and no disquisitions on Egyptology beyond assigning the Pharaoh of Joseph to the shepherd kings and mentioning Menepthah as the Pharaoh of the Exodus. The proximity of Mena to the Great Pyramid naturally led the travellers to explore its interior, an enterprise which took place on Boxing Day, and provided materials for a picturesque description. The Sphinx was often visited, and there is a graphic account of its appearance. Dr. Bentley, who has for some years been resident at Mena during the winter months, contributes a most instructive supplementary chapter of about thirty pages, containing hints for invalids on the maintenance of health in Egypt. He strongly recommends that the journey should be made by the long sea passage from the Thames to Brindisi, at which port the traveller should go on board a steamer for Alexandria. The book is just such a one as the tourist should peruse before setting out and take with him on the voyage.

The Practical Guide to Algiers. By GEORGE W. HARRIS. London and Liverpool: George Philip and Son. 1895.—Algeria has of late years been increasingly resorted to by English tourists and invalids. There is no probability that it ever will have for us the political and antiquarian interest attaching to Egypt; but it is in point of time almost a week nearer to our shores, and the great extent of the country, together with the mountainous character of the interior, cause it to present some variety of climate and much diversity of natural feature. Public security is guaranteed by the strong military and civil administration which France has conducted for the last sixty years, and which has converted the piratical and turbulent natives into a law-abiding population. Algiers, the capital, is most conveniently reached from Marseilles, steamers passing each way three times a week, and covering the distance in about twenty-four hours. Mr. Harris's Guide, though of a size convenient for carrying in the pocket, contains a vast amount of information judicially selected and well arranged. It is divided into three sections, treating respectively of Algiers itself, the environs, and the rest of the country. Each of these is elucidated by a map, that of the last section showing the whole country from Tunis to Morocco, and from the Mediterranean to the desert. Oran and Constantine are described, and also Tunis, which may be reached from Algiers either by rail or steamer. Minute directions are supplied for excursions, both by rail and diligence, to many places of interest, particular attention being given to Biskra, far to the southward, and Hammam-Meskoutine, where there are natural baths having a temperature of 203° F. As a preface the author prints a letter to himself from Lady Burton, wife of Sir Richard Burton, the celebrated explorer.

Transactions of the Clinical Society. Vol. xxvii. London: Longmans, Green, and Co. 1894.—This volume comprises the papers read and an abstract of the notes of cases shown before the society during its twenty-seventh session—October, 1893, to May, 1894. Nearly all the papers supply information about subjects (not infrequently of great rarity) of interest to the profession, whilst some suggest new methods of treatment. As might be expected, the number of surgical cases far outweighs the number contributed by the physicians, and shows in some way the progress of the surgeon's art during the year. We have published in the columns of THE LANCET abstracts of the proceedings of the society, and have also supplied notes of the discussions which have been held. In these transactions the discussions are not included; this in a majority of instances is very wise, but sometimes definite facts (not mere opinions) are contributed by members which would be useful if added for reference. The living cases shown and described by card were of uniform excellence, and the notes of them selected for publication are most useful for future reference. The book is judiciously

illustrated with chromo-lithographs and woodcuts which add much to its value.

Whittaker's Windsor Peerage, Baronetage, and Knightage for 1895. London: Whittaker and Co.—Books of reference such as this are almost indispensable to the general reader on account of the numerous ramifications of aristocratic families, the frequent changes of title caused by death and succession, and the additions always being made, more especially to the various orders of knighthood. This volume, by the compactness of its arrangement and the free use of small type, contains a large amount of information within reasonable limits, and forms a portable and convenient guide for occasional use. As might be expected, the exterior is resplendent in scarlet and gilding.

New Inventions.

LIQUID SULPHURETTED HYDROGEN.

THE liquefaction of gases nowadays is no mere scientific possibility; it has become a commercial undertaking. Already we are familiar with liquid carbonic acid, nitrous oxide, and sulphurous acid as commercial commodities which may be obtained in large quantities; but until recently sulphuretted hydrogen was not a member of this useful category. Yet probably there is no more useful agent to the investigating chemist, the toxicologist, and the physiologist than sulphuretted hydrogen in the laboratory. It is in constant use for the determination and separation of metals, it is indispensable in the series of operations for the isolation and purification of many well-defined organic bodies, for the separation of toxines and for the purification of poisons (alkaloids, ptomaines) prior to

their identification. Sulphuretted hydrogen is, in fact, one of the most useful servants at the disposal of the chemist, analyst, and toxicologist. The convenience, therefore, of having at hand the pure gas contained in a cylinder, from which it may be steadily withdrawn, is too obvious to need further remark. Lecturers on chemistry, and especially practical chemistry, know full well the trouble and inconvenience attending the preparation of sulphuretted hydrogen from sulphide of iron by acting upon it with a dilute acid. The pure and dry gas is compressed into specially made steel cylinders, each containing one pound of liquid, equal to about eleven cubic feet of gas at atmospheric pressure. The cylinders have been tested to 1500 lb. per square inch, and the pressure when filled with liquid H_2S never exceeds 300 lb. per square inch. The valve has been especially designed for use in the laboratory. This enterprise is due to Messrs. Baird and Tatlock, 14, Cross-street, Hatton-garden.

FLETCHER'S NON-LIGHTING-BACK BURNER.

It is evident that the use of non-lighting-back burners in gas fires is rapidly becoming the rule rather than the exception. Prior to the report of THE LANCET Special Analytical Sanitary Commission on Smoke Prevention and Perfect Combustion (III. Gaseous Fuel, Gas-Heating, and Gas-Cooking Appliances)[1] in which was pointed out the pressing need for a remedy for this defect, which is peculiar to atmospheric burners, we believe that such a device did not exist, or if it did its application was neglected in the case of gas fires, or probably it was of little practical use. Since the issue of this report we have noticed two burners, constructed in a special and slightly modified way in order to obviate this drawback. Still another example of the force and importance which makers of gas stoves evidently attached to our remarks on this defect, is afforded in the non-lighting-back burner which has recently been sent to us by Messrs. Fletcher, Russell, and Co., Limited, 115, Cheapside, E.C. In this burner the orifices are bound on either side by projecting cheeks of iron about half an inch high, while the gas itself is delivered through a gallery of slits immediately beneath the orifices and in the body of the burner, which contains the mixture of air and gas. We found on testing that the proportion of air mixed with the gas was rather less than that contained in a mixture which gives a steady, colourless, or slightly blue flame. In consequence of this, the flames exhibited white caps, but doubtless this could be easily corrected by careful adjustment of the injector. The main object, however, is secured, since all manner of attempts to cause it to light back, representing to an exaggerated degree the conditions which might obtain in practice, failed.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 25, Grosvenor-street, W., on Wednesday, Jan. 3rd. In the unavoidable absence of the President, Mr. George Pollock, Mr. T. Holmes, Vice-President, occupied the chair. The minutes of the last meeting were read and confirmed. In reference to the almost identical resolutions sent in to the Secretary of the College on behalf of the Society of Fellows and the Association of Fellows for the meeting of Fellows called for Jan. 3rd, the Chairman stated that one of the members of the Executive Council of the Society of Fellows had called on him and suggested that it would be advisable that only one resolution should be proposed, and that this motion should be proposed by a member of the Society of Fellows and seconded by a member of the Association of Fellows. The committee of the Association approved of this course and requested Mr. T. Holmes to second the resolution of which Mr. Bennett had given notice, and to communicate this determination to Mr. Bennett. Mr. Gant had written to say that the state of his health absolutely prevented him from attending the meeting of the committee and that he could not be at the College meeting on Thursday. It was therefore considered expedient that leave should be obtained to withdraw Mr. Gant's resolution at the meeting.

[1] THE LANCET, Nov. 25th, 1893.

THE Princess Louise (Marchioness of Lorne), accompanied by the Marquess of Lorne and Lady Northesk, visited the Victoria Hospital for Children, Chelsea, last week, and took part in the distribution of toys and presents to the sick children.

THE LANCET.

LONDON: SATURDAY, JANUARY 12, 1895.

WHEN the Council of the Royal College of Surgeons of England fixed the first of the half-yearly meetings of the Fellows of the College for the first Thursday in January we anticipated that there might be some difficulty in securing and maintaining a quorum, especially if the business to be transacted proved to be of an uninteresting or uneventful character. That there were good grounds for these anticipations was shown at the commencement of the meeting of Fellows held on the 3rd inst. at 4 P.M. in the theatre of the College, an account of which appeared in our second edition last week. Some minutes elapsed before the quorum of thirty was obtained and the attendance never rose to fifty. Most of the Fellows who came, however, stayed to the end of the proceedings, the agenda containing topics of considerable interest and importance both to the Fellows and to the profession at large. The first item of the programme was the formal report to the Fellows of the answer of the Council to the resolution adopted at the last meeting of Fellows requesting the Council to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President. Mr. HULKE, the President, who occupied the chair, reported that on July 30th the Council adopted the following resolution: "That the Council are not prepared at the present time to consult the Fellows or solicit their opinion through other means than the meetings of Fellows. They, however, point out that if any Fellow is anxious to test the opinion of the general body as to whether it is desirable to make any change in the present mode of election of the President it is open to him to submit a motion on the question to the meeting of Fellows in January or subsequently." No one rose at the moment to make any comment upon this reply; it was received *sub silentio*. In THE LANCET of Dec. 29th, 1894, we took occasion to demonstrate the fallacy involved in the latter part of this answer to the resolution of the Fellows, and expressed our regret that the Council had not complied with their request and undertaken the canvass of the Fellows in regard to the mode of election of President. Our words found an echo in more than one quarter at the meeting in connexion with the results of the canvass made by the Society of Fellows and reported by Mr. HERBERT PAGE.

This canvass embraced those Fellows only resident in Great Britain. A thousand voting papers were sent out, and 463 papers were returned, but for some cause or other 50 of these proved to be useless. Three alternatives as to the mode of election of the President were submitted to the Fellows—viz.: (1) election of the President by the Fellows, (2) nomination of the President by the Council and election by the Fellows, and (3) election of the President by the Council as now provided for by the Charters of the College. Of the 413 replies, 112 were in favour of election by the Fellows, 156 preferred nomination by the Council and election by the Fellows, and 150 were satisfied with the present mode of election by the Council. Mr. HERBERT PAGE, who urged the Council at the meeting of the Fellows in July last to canvass the Fellows on the mode of election of the President and to abide by the decision whatever it might be, gave it as his opinion that the poll showed that the great body of Fellows did not desire any alteration in the present mode of election, and that no change ought to be made. It was pointed out, however, by Mr. RIVINGTON, and subsequently by Mr. VINCENT BELL of Rochester and Mr. HOLMES, that, so far as the poll went, it exhibited a considerable majority in favour of election of the President by the Fellows either directly or after previous nomination by the Council, and that if the canvass had been undertaken by the Council the majority would in all probability have been considerably larger. As the numbers at present stand it will be seen that of 418 Fellows 263 are in favour of the Fellows electing the President and 150 in favour of the present mode of election. This may be construed to show a substantial preponderance of opinion in favour of a modification in the present mode of election.

The main argument for the present method is that the Council have the best opportunities of judging of the fitness of their colleagues for the office of President; whilst the upholders of election of the President by the Fellows, aspiring as they do to share in the life of the College, regard the election of the President by the Fellows as a higher honour to the selected candidate than election by the 24 Fellows who constitute the Council. The middle course—nomination by the Council and election by the Fellows—would satisfy the legitimate aspirations of the Fellows and would obviate the objections of some that election directly by the Fellows might result in the elevation of a candidate not well qualified to preside at the Council and the College meetings, and to transact the business devolving upon the President.

At the conclusion of the discussion on the result of the canvass of the Fellows in reference to the mode of election of the President Mr. W. H. BENNETT, on behalf of the Society of Fellows, moved, and Mr. HOLMES, on behalf of the Association of Fellows, seconded, the following resolution: "That the Council be requested to appoint a conjoint committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new Charter together with the details thereof." The reasons given in favour of the resolution by the two speakers were curiously dissimilar. Mr. BENNETT spoke as if he rather courted a decision against the expediency of the Council applying for a new Charter at all; whilst Mr. HOLMES spoke as if there could be no question of the necessity for a new Charter for the advantage alike of the Council, the Fellows, and the Members of the College. Mr. BENNETT rejoices in the thought that the days of antagonism between any number of the Fellows and the Council are gone never to return, and is anxious for finality whatever the issue of the present application of the two societies may be. Mr. HOLMES disclaims the idea altogether that any antagonism has prevailed, and regards the formation of a joint committee of the Council, Fellows, and Members of the College

as the commencement of an era of progressive usefulness to the public and profession of the great corporation of which he is so worthy a scion. It may be that the divergent lines on which the resolution was presented to the meeting had some effect upon the division, for 22 voted for it and 14 voted against it. This, however, is at least three to two, and whatever the answer of the Council may be, it is plain that the fulfilment of the legitimate aspirations of the Fellows and of the Members of the College cannot be delayed for any lengthened time.

THE contest in Cork between honourable and humane medical men fighting against the supporters of the abuse of the club system proceeds. It is pitiable to see a great profession driven to assert its rights in this fashion; but it is not the fault of the profession. For ages it has been the unresisting victim of its own willingness to befriend the poor, till it has almost come to be believed that its aid can be had without terms and that others may be assisted in the same way. If it is undignified in a medical man to stipulate for remuneration before answering a call to an emergency or case of disease, it is mean on the part of those who are likely to require his services not to treat with him beforehand, and in doing so to estimate justly his claims. It may seem a light matter to ask a medical man to write a prescription, to visit a patient, to set a limb, or to see a woman safely out of the dangers of childbirth. Those who judge so do not think at all. They fail to remember the elements of character that go to make a good medical practitioner, or the years of study, or the thought for individual cases and circumstances. The members of clubs are the *élite* of the working classes. They know what good medical attendance is and what its value. Many of them make the best private patients of the best medical practitioners of a neighbourhood. If they pay the medical man less than some of his richer patients they are not the less esteemed. This, after all, is the proper form of medical attendance for rich and poor. The more of it the better both for families and practitioners. Treatment in clubs, and still worse in medical aid associations, is more or less treatment in the lump and in a crowd. This ought to be restricted severely to classes to whom it is a real accommodation. The more it is so restricted the better will it be for those who remain to be so attended. To effect such restriction is the aim of the medical men of Cork at the present crisis, and in their efforts they should have the assistance and coöperation of every member of the medical profession.

We regret to say that while there is unanimity in Cork among the medical men, strangers from without are ready to take the vacated places. The *Cork Constitution* gives an interesting account of the proceedings on Jan. 1st at a meeting of the St. Luke's Mutual Benefit Society. It is pleasant to be able to say that a great deal of good feeling and common sense characterised the proceedings, which began with the reading of a letter to the secretary of the St. Luke's Mutual Benefit Society from its medical officer, Mr. PHILIP G. LEE, intimating that unless the society accepted the new rules he would cease to act as their medical officer after Jan. 1st, but agreeing, with great consideration, to act for a month in order that no member should suffer inconvenience. Nothing could be more satisfactory than the way in which the members spoke of their medical officer, whom they evidently appreciate. One of the members, Mr. HOSKINS, while denouncing the rules as infamous, declared he never knew a medical man for whom he had more regard than he had for their own. Strange that it should not strike Mr. HOSKINS that such a man would be the last to agree to "infamous rules." Sir JOHN SCOTT, in speaking, paid a high tribute to the medical men of Cork, and expressed himself in favour of seizing any chance of an amicable arrangement. Several speakers intimated that the medical men were willing to meet delegates from the club. In the end it was resolved unanimously to advertise for a medical officer, and the secretary was instructed to advertise in Dublin, Cork, and Belfast. But, as we have already said, there is a danger of the medical officers being supplanted by strangers. At this very meeting it was intimated by Mr. PRITCHARD that "there was a medical officer in the town now who was willing to do duty for that society or any other in town free for the present, and if he was not appointed he was willing to give up the society to any medical man that was appointed." Similar intimations were made in several other societies. At the Church of Ireland Young Men's Mutual Benefit Society a medical officer with numerous qualifications was unanimously elected. At St. Finn Barre's Mutual Benefit Society on the same day, Dr. MAGNER having resigned, it was resolved to advertise, the gentleman above referred to to take charge in the meantime. At a meeting of Joe Ronayne's Branch of the Irish National Foresters, in place of Dr. MAGNER, resigned, a medical gentleman, "late of London," was elected to the vacancy. We can only leave these gentlemen to their own reflections. They are acting within their legal rights, but it is acting disloyally to their profession and its best interests. It will never be a consolation to them to reflect that at a great crisis in the medical profession in Cork they took the wrong side. They cannot make as excuse either the hardship of the poor or the unreasonableness of their medical brethren. They are dissociating themselves from men who stand high in the opinion of their patients and who are fighting the true battle of the profession.

We cannot believe that the leaders of the clubs in Cork will think by such offers of temporary help that they are doing the best for the members. A medical man cannot be displaced by the first comer who offers himself. Good mechanics of tried service cannot be disposed of in that way by any good employer, and a medical man is much more than a mechanic. We are glad to learn that the medical men are willing to meet delegates of the clubs and are showing a conciliatory disposition. Any reasonable concessions should be made; but the main demands of the medical men are reasonable and should be pressed. The writer of a letter to the same issue of the *Cork Constitution* signing himself "Often Puzzled" maintains that the ordinary charges of Cork medical men are higher than those of English practitioners. He maintains that if fees are properly tabulated and regulated according to the means of the patient, estimated on rental, many will leave the clubs and become private patients. We fancy there can be little doubt

that in Ireland two causes have contributed to derange the proper relations of medical men to the public. One is the dispensary system, making it too easy to get attendance for nothing; the other is an ideal system, according to which every practitioner is to charge the traditional fee of one guinea per visit. There is room between these extremes for the mass of the people to be attended on terms neither impracticable to the patient nor unjust to the medical practitioner. The present crisis should end in the definition of such terms and strangers should withdraw.

LONDON has now for many years had to consider methods of collection and disposal of its house refuse, questions which have been full of difficulty since the time when this refuse had a distinct monetary value. In former times, when building operations were carried on in the metropolitan area to a much greater extent than they are now, contractors were willing to make terms with parish authorities for the privilege of collecting and disposing of refuse which are impossible under the altered conditions of the present day. In those days the manufacture of bricks gave ample opportunity for the utilisation of the "breeze," and in much greater degree than at present the "soft core" could be used for the fertilisation of the soil, and other components of the refuse could be turned to profitable account. As time went on, and the value of the refuse diminished, the contractors demanded larger and larger sums for its removal from houses, until sanitary authorities have been left to determine the question whether its destruction by fire is not the most economical procedure. The quantity of this material which has to be removed, and the manner in which it may best be burnt, may be learnt from a report issued in 1893 by the medical officer and engineer of the London County Council. This report was evidently prepared with the intention of putting the Council in a better position to insist on the more effectual scavenging of London. Contractors had in some instances become negligent; refuse, at periods when it could least be utilised, was left to create nuisance in houses, and sanitary authorities had only in some districts the enterprise to organise arrangements of their own, which made them independent of the contractor's natural desire for profit.

A report has just been issued by the County Council's medical officer which is a proper sequel to that to which we have referred. It contains a summary of reports by Dr. C. W. F. YOUNG, assistant medical officer of health, on the collection and disposal of refuse by London sanitary authorities. This summary contains much matter of considerable interest, and the London County Council have done a useful piece of work in making the results of their officer's inquiries generally available. Considering first the methods of disposal, the report points out that in twenty-five districts the sanitary authorities themselves collect the refuse without the employment of a contractor. In the case of six only of these authorities is the refuse subsequently manipulated in dustyards in London—in all other cases it is either destroyed by fire or removed by barge or rail beyond the limits of the county. Evidently, therefore, sanitary authorities are not disposed to enter upon the precarious business of endeavouring to turn the disposal of the refuse to profitable account in London. If it has any value in their hands, this can be as well or better secured by its immediate removal into country districts, and this is evidently the course which is suggested to any authority desiring to free London from the nuisance which attends the accumulation of large quantities of house refuse in its midst. The refuse of fourteen districts still employing contractors is manipulated in whole or in part at dustyards within the county. This may be due either to the better opportunities which the contractor possesses for the profitable utilisation of the refuse in London, perhaps in connexion with building operations; but it may also in part depend upon insufficient recognition of the disadvantages which attach to the existence of dustyards in a crowded city. It is probable that at no distant time the contractor will feel the weight of the by-laws of the London County Council relating to the carriage and disposal of offensive matter, and that the remaining yards in which house refuse is manipulated will gradually disappear from the metropolis. Dr. YOUNG'S report shows that the employment of machinery is in these yards replacing the old system of hand sorting, and certainly no one familiar with the business of hand-screening carried on in the dustyards will regret this change. The spectacle of women standing up to their waists in dust, holding the sieves into which spadeful after spadeful of refuse is thrown is one which is not easily forgotten by the spectator. With the cleaner operations of machinery there has been more regard than formerly for the health and comfort of the workpeople. Waterclosets have generally been provided, and in particular instances, although only exceptionally, lavatory accommodation and rooms for meals.

The subject which most affects the comfort of the householder is the removal of refuse from his premises. Dr. YOUNG'S report gives an account of the arrangements adopted in each district, and certainly on paper these arrangements in many districts do not appear open to objection. In the working, however, there is much to be desired. The claim made by sanitary authorities that dust is removed from every house once a week is often found in practice to mean that carts perambulate the street and the householder has the opportunity, if he hears the dustman's cry, to call him to his aid. To test the value of the scavengers' operations an inspector was employed by the Council to make a house-to-house inquiry, and the actual results were learnt by visits to some thousands of houses. Londoners, who know the difficulties they experience, will not be surprised that the Council's medical officer urges that the scavenger should call at every house at least once a week and that nothing short of such a system will effect the much-needed weekly removal of house refuse. We note with satisfaction that the publication of this report is not the only result of Dr. YOUNG'S inquiries. The Council have already addressed themselves to sanitary authorities in cases where their administration needs amendment. They will no doubt persevere in the work which they have undertaken, and at no distant time it may be hoped that householders in London will find that their dustbins are emptied with as much regularity and certainty as the report demands.

Annotations.

"Ne quid nimis."

THE REGIUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF OXFORD.

To most the appointment of Professor Burdon Sanderson, F.R.S., as Regius Professor of Medicine in the University of Oxford will come as a foregone conclusion. His scientific record is not only unparalleled among medical men, but would be hard to parallel in spheres of wider rivalry, while he possesses to an eminent degree the qualities that most aptly pertain to the University professor. Professor Burdon Sanderson's public work has been of the most valuable sort. He has been employed by the Government to make investigations upon such different subjects as cattle plague, cerebro spinal meningitis, and the influence of heat on the health of miners; and twelve years ago he sat on the Royal Commission on Hospitals for Infectious Diseases, and quite recently on that appointed to inquire into the question of a Teaching University for London. But it is as a physiologist that he makes his recognised claim to celebrity, and we may be excused to medical readers from detailing his well-known work. It is as a physiologist also that he has been elected to the new post, and in this sense the appointment is a departure. But it is a departure that can be thoroughly well justified, for by as much as it is the boast of the followers of modern medicine that their practice is founded upon and developed from scientific principles, by so much must the tried worker in pure physiology be the fit person to become the great exponent of practical medicine. We congratulate Professor Burdon Sanderson upon his appointment, laying stress upon the fact that it comes very distinctly as a reward of merit, seeing that he has already served fourteen years as an Oxford professor of less exalted degree; and we congratulate the University upon securing for what is naturally in our eyes one of the most important professorial chairs, a man who is able to fill it.

THE SUPPORT OF HOSPITALS.

CONSIDERABLE attention has been drawn to the unsatisfactory state of the finances of Charing-cross Hospital, and a cursory glance at the seventy-third annual report shows that the debt of the hospital has increased during the preceding twelve months from £5394 1*s.* 7*d.* to £11,392 5*s.* 7*d.* The governors, in face of this alarming fact, as may be imagined, have been compelled to announce that the time was rapidly approaching when the hospital should not be allowed to exist on the generosity of its bankers. The cost and method of administration of the charity do not explain this serious depreciation, but legacies show the huge deficit of £6000 as compared with the previous year. The general financial depression adds greatly to the embarrassment which Charing-cross Hospital so severely feels, while the new scale of death duties can hardly fail to adversely affect in the future the revenue of all charities; for when a man of means has to provide for the loss of a large sum at his death his charitable subscriptions are usually the first to cease. We use Charing-cross Hospital as a text, but it is well known that many other institutions are in a similar pecuniary plight. The general and colossal apathy of the vast bulk of the public concerning the support of hospitals is due in part to ignorance and in part to the enormous amount of work of national importance done unostentatiously and gratuitously by the medical profession. When we reflect that a hospital, with a medical school attached, is not only a place where disease and suffering are cured and alleviated, but where disease is studied and knowledge of it improved, where medical men are educated for the good of the nation at large, we can easily see of what vast importance to the nation these institutions are. It has recently been pointed out in our columns that the medical and surgical teachers at the London hospitals alone, by their practically gratuitous work in educating students, present something like £200,000 to an opulent nation annually; but how few of the public know or think about these things? The patient who blesses his medical attendant for saving his life little reflects that his skill was acquired in the wards of a hospital possibly on the point of closing for want of funds. In short, the financial condition, not of Charing-cross Hospital only, but of many other similar institutions, might readily serve as a text to open up the very large subjects—subjects growing in urgency and soon to burst into unrestrainable prominence—the support of our teaching hospitals and the *raison d'être* of so much gratuitous medical work. Charing-cross Hospital is not large, and its beds are comparatively few. The useful work it does is undeniable, and its medical school performs excellent service in the training and education both of medical men and of dental practitioners. It would be little short of a disgrace to the richest city in the world if such an institution had to close its wards for want of funds.

DEATHS IN LAUNDRIES.

THE appalling loss of life through the fire at a French laundry establishment in the Edgware-road afforded both the coroner and the jury who held an inquest on the bodies of the eight victims at Marylebone an opportunity of urging that laundries should be brought under the operation of the Factory Act. It was only the other day that a man died in consequence of an accident and of the weakness resulting from overwork in a Battersea laundry. The coroner's inquest held on that occasion revealed a state of things which, as we remarked at the time, would not have existed had the Factory Act applied to laundries. Now, in the Marylebone district we find a very extensive laundry business carried on in two private houses, 412 and 414, Edgware-road. Between forty and fifty persons were employed on the premises. Surely this was to all intents and purposes, if not a factory, at least a workshop, and as such should have been rigorously inspected. The mistress of the laundry and seven assistants slept on the establishment. These eight persons lost their lives in the fire. It appears that they were in the habit of retiring to rest in the upper part of the house, while below linen was hung out to dry in rooms where four stoves were left burning. That the linen might fall on these stoves and ignite was evidently foreseen, as, with one exception, there was a wire protection over the stoves. Perhaps the one unprotected stove was the cause of the fire; in any case, had the laundry been under the Factory Act more effective precautions would doubtless have been enforced by the factory inspector. At the inquest the coroner, Dr. G. Danford Thomas, said he had held an inquest at Islington only the previous day upon a man who had been decapitated at a steam laundry; and Mr. Cameron, one of Her Majesty's inspectors of factories, who then watched the proceedings on behalf of the Home Office, said that he thought it very desirable that laundries should be included in the Factory Act. In this opinion the coroner thoroughly concurred. The Marylebone jury in their verdict on the Edgware-road fire stated that they were of opinion, and recommended that all laundries should be placed under the provisions of the Factory Act. It has been urged that only laundries where steam power and machinery are employed should be included in the Factory Act. We are glad to note that the jury in their

recommendation wished to see the Act enforced in all laundries. Though forty or more people were employed at the Edgware-road laundry, it appears that there was no machinery, and consequently such establishment would escape inspection if all laundries are not subjected to the proposed extension of the Factory Act. From the above it will be seen that within a month coroners' inquests have been held with respect to the loss of human life in three different London laundries. This is evidence of a sufficiently startling and dramatic character to enforce our contention that laundries must be brought under the Factory Act. Yet this is nothing as compared to the enormous loss of human life which is brought about slowly, without any attending dramatic circumstances and publicity, through the life-wasting, insanitary conditions under which much of the laundry work is done.

CLUB TOWELS.

IT is the general practice in the better-class clubs to provide an unlimited supply of towels. Each time a member washes his hands he uses a clean towel. As a rule, in wiping his hands once the towel is barely, if at all, soiled. It cannot be expected that under these circumstances the towel will be properly washed. There is nothing to wash. It suffices to dip the towel in some water, to dry and iron or mangle it, and to all appearances it is again fit for use. Would such a perfunctory performance suffice to cleanse a towel? Indeed, it raises the suggestion whether towels used in restaurants, clubs, &c., should not be disinfected as well as washed. Of course we presume that no one would knowingly go to a club while suffering from an infectious disease; but it sometimes happens that a person is in an infectious condition without being aware of the fact. Moreover, infection of towels may occur, and it would be much more satisfactory to know that they were thoroughly disinfected as well as scalded and scrubbed. Boiling water may be considered an excellent disinfectant. If in the light of modern bacteriology the immersion of linen in boiling water during the process of washing may not always be of sufficient duration to destroy every known germ, the boiling of linen nevertheless does afford a certain degree of protection against the seeds of disease; but the towels of high class clubs are generally so clean when sent to the laundry that they are apt to receive less than the usual amount of scrubbing and boiling. There is a virtue after all in dirt if it ensures a thorough cleansing, and a really dirty towel is likely to be more thoroughly washed and cleansed than a comparatively clean one.

RESPONSIBILITY OF DISTRICT SURVEYORS.

SOME correspondence which has recently passed between Mr. J. Galloway Weir, M.P., on the one side, and the Home Secretary and the President of the Local Government Board, on the other side, goes to show that the district surveyor is in the enviable position—or unenviable, as the case may be—of exercising a jurisdiction from which there is no appeal. To suggest that the control of an appellate court may be an advantage to the authority controlled may at first sight seem to savour of affectation. But a little reflection will show that district surveyors are in a position to be very specially exposed to the attack of improper influences if they are understood to be the depositories of an uncontrolled power. To an upright man nothing is more disagreeable than to have to be constantly repelling improper advances; but that is probably the penalty of such greatness as we have referred to. The sooner, therefore, that an official superior can be found for the district surveyor the better it will be both for him and for the public. Mr. Weir, whose complaint had reference to the defective construction of some houses in London, addressed himself first of all to the London County Council, but his remonstrances led only to a disclaimer on the part of that body of any responsibility for the acts or omissions of the district surveyor. Their correspondent, appealing next to the Home Office, was informed that the Home Secretary had no jurisdiction; and we see from a notice of this correspondence in the pages of our evening contemporary, the *Pall Mall Gazette*, that the Local Government Board is said to have taken a similar attitude. It may be, of course, that Mr. Weir has not yet applied in the right quarter for redress; but, at least, he has given himself no small amount of trouble, and it cannot be doubted that the machinery — which, with all his industry, he has failed to set in motion—is useless for practical purposes. When it is considered how important are the duties which district surveyors undertake, how large the confidence which Parliament and the public repose in their integrity and energy, and how insidious and far-reaching the consequences of their misconduct or mere neglect may be it becomes at once evident that some more effective discipline than is at present available is required for the perfecting that branch of the public service which it is their province to administer. If further legislation be necessary let us have it, and the sooner the better; but in the meanwhile cannot some one of the departments which have satisfied themselves that they do not possess the jurisdiction inform us to whom to go?

KITCHEN BOILER EXPLOSIONS.

IN spite of the occurrence of several catastrophes which were due to the sharp visitation of frost just exactly a year ago there have been no practical official investigations since made into the causes of kitchen boiler explosions, and there will be little reason for surprise, therefore, if any increase in the severity of the weather which we are experiencing at the present time should result in a similar series of disasters. The urgent necessity of amending the Boiler Explosions Act of 1881, so as to bring within its operations the explosions of kitchen boilers, is especially evident when regard is had to the fact that the number of fatalities and cases of personal injury due to such occurrences exceeded considerably the number of those accounted for by all the explosions of ordinary steam boilers throughout the United Kingdom during 1893. There is now no reason why legislation should not be brought to bear immediately upon the management of domestic hot-water appliances, since there is no longer any obscurity surrounding the cause of these explosions. On this point there was a large diversity of opinion, and in the interests of the public safety we ourselves gave some attention to the subject and expressed our views in the columns of THE LANCET.[1] Although we freely admit that these views were based in a measure on theoretical considerations, yet it was a source of considerable satisfaction to us to learn, as we have since learned, that the publication of these opinions led to a complete ventilation of the subject in the lay and technical press; but even in the ideas expressed in the latter, we should observe, there was by no means an absolute accordance of opinion. Speculation has at length yielded to the teaching of practical observation in the results of a very interesting and conclusive series of experiments carried out under the evidently able instructions of Mr. R. D. Munro, M.I.M.E., the chief engineer to the Scottish Boiler Insurance and Engine Inspection Company, Limited, Glasgow and Manchester. The highly instructive and practical results of this really important investigation are embodied in a *brochure*, a copy of which has recently reached us.[2] Mr. Munro's tests were eminently practical

[1] THE LANCET, Jan. 13th, 1894.

[2] Kitchen Boiler Explosions: Why they Occur and How to Prevent their Occurrence. By R. D. Munro, M.I.M.E. London: Charles Griffin and Co., Limited, Exeter street, Strand. 1895.

and every conceivable and possible cause of kitchen boiler explosions was investigated. Briefly, his conclusions are that there is no mystery about the explosion of a domestic heating boiler, that the theory which creates an unknown and highly explosive gas for this purpose is absurd, and that it is equally erroneous to believe that these boilers burst *disastrously* by the sudden generation of steam consequent upon cold water being introduced when they are red-hot. Domestic boilers cannot burst disastrously unless they contain a store of highly heated water immediately prior to rupture occurring, and the damage which they are capable of causing is in proportion to the quantity and heat of the water. In this respect they resemble ordinary steam boilers, and their safety can only be secured when they are equipped and treated as such. As to preventive measures, "a safety valve is the simplest and most effectual preventive of over-pressure, and if properly constructed and placed it is less liable to stoppage than any other provision yet suggested or applied." The valve should be so situated as to be free from soot and dust and also quite accessible for examination. It may be placed in a small case set into the back of the fireplace. We strongly recommend this little book to the notice of householders. It is sensibly and clearly written and contains not a single paragraph which will not be read with profit and instruction. As Mr. Munro expresses it, the disease is now understood and the remedy has been found, and it only remains, we may add, to apply it. There is wisdom in the suggestion, which should be represented to the Board of Trade, that just as boiler-makers are made to incur a responsibility under the Boiler Explosions Act, so hot-water engineers should be made liable to penalties when they fail to fit up boilers and their connexions in a safe and efficient manner. We trust this matter will receive the serious consideration which it demands.

SERO-THERAPY AND SANITATION.

As the result of a tour through the great cities of England and Scotland Dr. Angelo Celli, Professor of Hygiene in the University of Rome, puts on record his opinion that in all aspects of sanitary regulation and hospital equipment Italy is 200 years behind the British Isles. The fact is admitted by others of the Italian hygienist's compatriots, and its causes are not far to seek. One of them is undoubtedly an impatience of the slow, prosaic methods of sanitary precaution and a belief, almost mediæval, in the power of drugs. This superstitious reliance on "royal roads" to health accounts for the fact that even the most unquestioned agents in the pharmacopœia have not a fair chance in Italy, whether in public hospital or private dwelling, so defective are these in the elementary conditions of healthful life—viz., prompt and thorough removal of refuse, pure water-supply, and fresh air. The recent introduction of the antitoxin treatment of diphtheria illustrates this weak side in Italian—and, indeed, to a large extent in Continental—methods of combating disease. While in Great Britain sero-therapy, as applied to diphtheria, is still the subject of careful induction and cautious application to practice, in Italy and other European States it has been welcomed at once as a "sovereign remedy" or "specific," and the causes of the "bane" itself are forgotten in the enthusiasm with which its "antidote" is hailed. Let the reader dip into any lay journal south of the Alps, and he will find towns and cities and communes, hitherto so poor as to leave their drainage and water-supply neglected, subscribing large sums to send young physicians and health officers to Paris or Berlin to study the *rationale* of sero-therapy, and to bring home plentiful supplies of the serum for immediate use. Populous centres, still content to take their drinking water from wells sunk in the subsoil or to let their sewage stagnate in antiquated drains *en route* to the stream that flows past them, grudge no expense in procuring the "anti-diphtheritic elixir," as it has been called. The same readiness to lose sight of prevention in the eager hunt for cure has, indeed, been witnessed abroad in other diseases besides diphtheria—the discovery of this or that "bacillus" and its putative counter-agent being quite enough to arrest or discourage every effort to check the malady in question at its source. We have in all this an example of the slow progress made by rational medicine in countries that have not yet cast the slough of mediæval tradition—an imperfect realisation of the etiology of disease; a practical ignorance of medicine as a branch of nature study; a hugging of the chains of scholastic "system" in forgetfulness of the lines on which the healing art was laid by the Father of Medicine himself. Sero-therapy has, doubtless, a great future before it, and in other maladies besides diphtheria, but its introduction would be a doubtful blessing if, as in Southern Europe, it caused a neglect of the rudimentary conditions of health summed up 3000 years ago in the Hippocratic *περὶ ἀέρων, ὑδάτων, τόπων* (concerning air, water, locality).

THE WANT OF SANITARY ACCOMMODATION IN LIVERPOOL-STREET.

THE planting of two great terminal stations in what was a generation ago the out-of-the-way thoroughfare of Liverpool-street has necessitated great alterations in the condition of that highway and its purlieus, but upon the whole less perhaps than might have been supposed by an old stager who could have foreseen the enormous development of the traffic which was destined to ensue. In one respect, however, he would not have been at all likely to overestimate the consequences, for he could hardly have guessed that the omnibus traffic would expand to larger proportions than it has in fact assumed. Now, where the traffic brings omnibuses to a halting-place in even a small fraction of the numbers which all day long throng the roadway in front of the Broad-street Station, it is the obvious duty of the local ædiles to provide convenient sanitary accommodation for the 'bus men. That this duty should have remained unperformed to the present day is greatly to the discredit of somebody, and we hope that the responsibility is sufficiently clear to make the somebody in fault uncomfortable in his present neglect. He, or rather *they*, can hardly plead ignorance in a matter which forces itself so violently and so unpleasantly upon public attention. What excuse is there which can be put forward to palliate this manifest dereliction of duty?

"DENTISTS AND THE PUBLIC."

MUCH as we deprecate the general discussion of questions pertaining to the medical profession in the lay press, we have no hesitation in drawing attention to a pamphlet entitled "Dentists and the Public," a reprint of articles which recently appeared in the *Pall Mall Gazette*. In a sober and practical manner the writer deals with a profession in which, he says, charlatans unfortunately flourish, and advises those seeking aid and not knowing a reliable man to choose one who puts L.D.S., the only dental degree granted in this country, after his name. The Dentists Act, which was passed in 1878, was an attempt to clear an honourable profession from the evils with which it was beset. Up to that time there were a little over 2000 *bonâ-fide* dentists in practice, though few possessed degrees; but after the passing of the Act, which was made retrospective, no less than 480 persons, including chemists and their assistants, barbers, blacksmiths, &c., declared themselves to have been in *bonâ-fide* practice and therefore claimed the right to be on the Register. There are now 1306 registered dentists

who have taken the L.D.S. Of the 4806 who were admitted to the Register by virtue of their being in *bonâ-fide* practice before the passing of the Act 3489 still remain without any additional qualification. "Covering" is a serious evil and the writer urges that the time is ripe for strong legislative measures in regard to this matter. "American Dentistry," a phrase which has even less significance than "French polish" or "Russian leather," really means, as the writer points out, "Advertising Dentist," and we heartily agree with his closing words: "It cannot be too frequently reiterated that the man who advertises thereby stamps himself as unqualified. The properly qualified dental surgeon is under obligations exactly similar to those of the medical man with respect to advertising."

THE PURIFICATION OF WATER FOR DOMESTIC USE: A SUGGESTION.

SINCE bacteriology was born there has always existed a doubt as to whether the majority of domestic filters could render water free from bacteria or could reduce their number to any practically valuable extent. From time to time bacteriological investigations have been made with a view to set these doubts at rest, and on the whole the results have fully realised these anticipations. Still more complete and thorough probably than any work previously done in this direction is that recently published by Drs. Sims Woodhead and Wood,[1] who, as a result of their experiments, exempt very few domestic filters they have examined from the charge of inefficiency to remove organisms. Results like these, of course, must shake to its very foundation the confidence which the public has hitherto reposed in domestic methods of filtration, and the cry naturally follows, On what method, then, may we rely? As is the case with so many departments of study, in centring our attention on one method we have turned our backs on another, which, however, may possibly be equally good, if, indeed, not better. We have learned some striking lessons in late years of how nature effects the abundant purification of water; but it seems to us that we have imitated on the small scale only one of these processes—namely, the percolation of water through great depths of porous strata by which bacteria originally present are entirely removed. We have overlooked, we think, the equally important, because equally effective, natural process of purification by subsidence of particles during storage; and yet the irreproachable water of Loch Katrine, supplied to Glasgow, as well as the water supplied to most towns in the north of England, is submitted to no purification beyond the storage in reservoirs of vast size. Professor Percy Frankland showed over eight years ago that, if a water containing bacteria is shaken up with finely divided solid particles and allowed to subside for several hours, the large solid particles in falling to the bottom carry with them an astonishingly large proportion of the bacteria. Thus, after agitation with chalk for fifteen minutes of a water containing originally 8000 micro-organisms per cubic centimetre it contained only 270 organisms—a reduction equal to 97 per cent. Coke powder gave even a better result, for in a water containing innumerable organisms before treatment there were found absolutely none at all after subsidence of the coke particles, the reduction effected being therefore equal to 100 per cent. Similarly, animal charcoal effected a reduction of 99 per cent., the original water containing 8000 and after subsidence only sixty organisms per cubic centimetre. Vegetable charcoal, again, reduced the number from 3000 to 120, which is equal to a reduction of 96 per cent. There are strong reasons for believing, then, that, by the simple expedient of agitating water—say, with well-burnt powdered coke—and drawing off the water after the particles have subsided, it would be freed from its organised and, it may be, its disease-producing inhabitants. This process appears certainly to be as simple as filtration and should give very little trouble in its practical working; moreover, it cannot surely be costly. Coke, unless well burnt, would probably impart a foreign taste to the water, which, however, could be removed by passing the water through a filter containing an oxidising medium, in which case the filter need not be an efficient remover of organisms, since after the subsidence treatment there should be none to remove. Confronted with these facts, we fail to see why this method should not be tried in the place of established methods of purification, which in the light of recent research have been shown to fail. We cannot imagine that it offers much inconvenience, trouble, or expense, while the water so purified would possess many obvious advantages over water that has been boiled. It could be easily adopted in hotels, schools, barracks, and other large buildings. We commend the attention of inventors to this apparently effectual, though simple, means of purifying water for domestic use.

[1] Brit. Med. Jour., Nov. 10th, 1894.

HONOURS AT THE LONDON UNIVERSITY.

THE published list of the results of the recent examinations at the University of London shows a series of remarkable successes for St. Thomas's Hospital Medical School. In the Final M.B. Examination Mr. A. E. Russel obtained the gold medal in Medicine and Mr. C. S. Wallace the gold medal in Obstetric Medicine. In the B.S. Examination Mr. J. H. Fisher, F.R.C.S., took the scholarship and gold medal; Mr. C. S. Wallace, F.R.C.S., qualified for the gold medal; and Mr. S. W. F. Richardson, F.R.C.S., obtained first-class honours. In the M.D. Examination Mr. Seymour G. Toller took the gold medal; Dr. Toller had previously distinguished himself in the M.B. examination, 1892, when he took the scholarship and gold medal for Medicine and also for Obstetric Medicine.

CHARGE OF INDECENT ASSAULT.

AT the Oxford Sessions on Jan. 1st Mr. Samuel Daniel Hine, surgeon, was tried for having indecently assaulted Edith Hutchings, aged thirteen, on Aug. 14th last. From the evidence it appears that Mrs. Hine was away from home, and that Mr. Hine, who had previously employed the prosecutrix in a similar capacity, asked her to get his breakfast. The allegation against the accused was that he went into the kitchen, kissed the girl, and, under the pretence of auscultating her chest, passed the bounds of professional conduct. On the same day the girl complained to her mother and a neighbour. Mr. Hine's account was that, as she was troubled with a chronic cough, for which he had treated her, and as she did not look well, he examined her chest with a stethoscope, and as the girl complained of a pain in her stomach he placed his hand in that region to ascertain what was the matter with her. From some cause or other the prosecutrix cried, whereupon the defendant kissed her. On the one hand, it was contended that she cried in consequence of having been indecently assaulted, whilst Mr. Hine stated that he thought it was because he had hurt her by the pressure of the stethoscope. It was contended that prior to the alleged assault Mr. Hine locked the front door, but this was explained by the fact that the catch did not act properly. For the defence evidence was given that the mother of the prosecutrix had spoken of getting money out of Mr. Hine. The chairman of the sessions, in directing the jury, said how easy it was to make such charges and how difficult to disprove them, especially in the case of a medical man. The jury at once acquitted Mr. Hine. We fully endorse the chairman's charge and the verdict of the jury.

A conviction could not be rightly obtained on the evidence, which tended to show animus on the part of the girl's mother, on the one hand, and, on the other, that of the prosecutrix was clearly open to the interpretation given by Mr. Hine. At the same time, we must confess that Mr. Hine acted very imprudently in making the examination he admitted having done under the circumstances in which he and the prosecutrix were placed. There was clearly nothing urgent in the case, and a wise discretion would have dictated to Mr. Hine to ask the girl's mother or some other person to be present.

THE DEATH OF LADY PAGET.

IT is with deep regret that we chronicle the death of Lady Paget, the wife of Sir James Paget, a regret that we know will be shared by the whole of our profession, British and Colonial, English-speaking and foreign. Lady Paget was a daughter of the Rev. Henry North, domestic chaplain to Her Majesty the Queen's father, the late Duke of Kent, and was married to Sir James Paget as far back as 1844, their golden wedding being celebrated last year. We tender our sincere and respectful sympathy to Sir James Paget in the irreparable loss that he has sustained in this severance of a long partnership in affection.

THE PRESIDENCY OF THE INDIA OFFICE MEDICAL BOARD.

WE announced last week that the Secretary of State for India had appointed Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, of the Indian Medical Department, to be President of the Medical Board at the India Office, in succession to Sir Joseph Fayrer, K.C.S.I. Brigade-Surgeon-Lieutenant-Colonel Hooper has held several important appointments in India, the last one being that of civil surgeon at Lucknow; and when he was in this country he acted, we believe, as a member of the India Medical Board and of the Army Medical Board. He has had a long and intimate as well as varied acquaintance with professional work in India. His experience as civil surgeon of different stations in that country has necessarily afforded him excellent opportunities for acquiring a practical knowledge of its diseases, and he is a deservedly popular member of the Indian medical service.

NURSES AND SMALL-POX DISSEMINATION.

DR. MONTGOMERY WARD, in presenting his last monthly report as superintendent medical officer of health to the Rathmines commissioners, Dublin, has expressed his conviction that one potent factor in the spread of small-pox and other infectious diseases is the action of nursing sisters from the various nursing institutions. He complains of their indiscriminate mixing with the healthy in the course of their attendance on patients suffering from disease of an infectious nature, as by travelling in public conveyances, frequenting public thoroughfares, places of worship and of amusement, and the like. He strongly recommends that the management of these institutions be asked to frame rules against this sort of thing, while also enacting adequate disinfection of the clothing of the nurses under the supervision of the sanitary authority. This advice is admirable; but is the risk to the public really great? Why not also enforce the wearing of some "infection-proof" dress by the nurses whilst engaged with the sick, one that can be easily disinfected before proceeding to another house, by whatever means of transit? Then such ablutionary exercises as can be secured would no doubt be valuable. With these precautions we fail to see what can be said against the kindly work of these sisters. It will, of course, always be well to keep nurses of one class of disease from attending patients suffering from one of a different nature; but whatever may be the proof of the spread of disease in this way in the past—and we should deem proof as exceedingly difficult to obtain—there would appear to be a balance of considerations in favour of the use of trained nurses, for those persons who have unfortunately not been removed to hospital, over the indiscriminate going to and fro of ignorant even though kindly disposed neighbours. Indeed, the visiting of the sick by the healthy, except in case of great emergency, is to be deplored, since this has undoubtedly proved in only too many instances a sure method of spreading infection, and has not infrequently filled the hearts of health officers with despair when attempting to stay the spread of disease.

THE INCREASE OF THE PROFESSION.

THE first definite—though not official—information we get in the course of the year in reference to the numbers of the profession is contained in the admirable Medical Directory (Messrs. J. & A. Churchill) which also contains much other useful information. There is still insufficient indication of any adequate abatement in the tendency to overcrowd the profession which has been so apparent of late years and has been undoubtedly injurious to the tone and quality of medical practice. The numbers of the profession as they appear in the Directory for 1895 are 32,590, as against 31,772 in 1894 and 30,759 in 1893. In other words, there was an increase of 818 in 1895 over the previous year, as against an increase of 1013 in 1893 over the numbers in 1892. The 32,590 are thus distributed—we place the numbers of the previous year for comparison between parentheses. In London, 5742 (5590); in the provinces, 15,313 (14,897); in Scotland, 3221 (3107); in Ireland, 2511 (2485); resident abroad, 3321 (3209); the Services, naval, military, and Indian medical, 2452 (2426); too-late list, 27 (58). It is possible that we are about to see a reduction in the number of aspirants to medicine, which, considering the exaction of examining boards and the slight pecuniary rewards which follow, it is remarkable we have not seen sooner.

LONDON FIRES: PREVENTION THE BEST REMEDY.

IT is a bitter thing that we have still much to learn from a teacher so unsparing as experience. We are ever ready to class his lessons among our misfortunes. Yet, after all, there is no one who will deny that in an important sense even these deserve our gratitude if, as it ought, reform follows upon their frequent exposures of our faults. Systems, companies, men are at one in this matter. There is no disaster which does not point the finger of blame at someone. Not even the unexplained catastrophe which occurred last week in Edgware-road constitutes an exception. It is true that the fire was accidental, that its precise cause is unknown, that all concerned in its extinction appear to have acted with admirable promptitude in the use of such means as were available, and that perhaps no system or method could have completely triumphed against the difficulties to be combated. Certain incidents connected with it, however, can only be remembered with regret. The fire is believed to have arisen in the drying-room of the laundry, probably from some clothes being hung up over a hot and unprotected stove—a circumstance which assuredly as we elsewhere point out suggests the wisdom, of extending the practice of official inspection to this class of establishments. Another and a far more important matter, however, was touched upon in the coroner's inquiry into this occurrence. This was the question of water-supply available in the metropolis in cases of like emergency, and the most effective means of its employment. In the case quoted fire-engines alone were used, and these after a brief but inevitable interval. This fact is somewhat painfully instructive not only when we consider

the actual loss of life incurred, but also when we reflect that some of our larger cities are able, thanks to a water-supply of constant and high pressure, to affix upon street hydrants suitably placed, hose which can at once and effectually control the beginning of a possible conflagration. To obtain such a supply for London would entail a very great and even a disproportionate outlay. Its realisation, therefore, however desirable, cannot for some time to come be counted on, unless, indeed, a proposed alternative method be adopted. This, which has already been applied in certain cases, as for the protection of New Scotland Yard and the National Gallery, consists in utilising by a combination hydrant the water-power of the Hydraulic Company to supplement that in our ordinary mains. The service available from this source is as yet of limited extension, but it includes in its area such districts as the City, Strand, and the docks. It is in these parts that widely destructive fires are most frequent, and in these, therefore, such a system as we have suggested should prove of the greatest advantage to persons and property. The suggestion is not a novel one. It has already been considered, and for the time being shelved, by the County Council. We should, nevertheless, like to hear more of it, or to learn by what other method it is proposed to endow a city abundantly supplied with water with the means of obtaining such continuous and high pressure in mains as shall render street hydrants in London, as in Liverpool, Glasgow, or even Hull, a general and an immediate means of fire extinction.

THE TENURE OF THE APPOINTMENT OF MEDICAL OFFICER OF HEALTH.

WE learn that the Nottingham Medico-Chirurgical Society has recently had under consideration circumstances connected with the appointment of the medical officer of health of Ilkeston. This appointment had been held for ten years by Dr. Carroll, during seven of which he received £30 per annum, during two years and a half £50, and for the last six months at the rate of £75 per annum. The Ilkeston town council were, therefore, evidently beginning to appreciate Dr. Carroll's work, and were by degrees attaching a better salary to his office; but at the period when he should have been re-elected it is stated that he was informed that his ideas as a sanitarian were too advanced for a place of such modest dimensions as Ilkeston, and another medical man was selected in his stead at a salary of £100, this gentleman being, we are informed, himself a town councillor previously to his election. The society has therefore passed a suitable resolution and communicated it to the local Members of Parliament, to the Parliamentary Secretary of the Local Government Board, and to the Incorporated Society of Medical Officers of Health. The action of the town council of Ilkeston brings into prominence the urgent need of an alteration of the law which renders such conduct possible.

THE COMPETITION OF HOSPITALS AND PRIVATE PRACTICE.

THE Great Northern Central Hospital, as competing with private practitioners for pay patients, has a companion from whom we might have expected better things. The *Evening Standard* gives an account of an entertainment at Guy's Hospital, partly for the pleasure of the patients in the Bright Ward, but "chiefly for making better known the paying ward of that name," where for three guineas a week medical, surgical, and obstetric cases are received. True, they are not treated by the honorary staff, as in the Great Northern Central Hospital. They are under the care of a gentleman "whose treatment has won for him the confidence and regard of all the patients." It is enough to disturb the repose of the illustrious man after whom this ward is named to think that any part of Guy's Hospital should have come to such uses. Not to go so far back, there is an eminent consulting surgeon of this hospital who occasionally favours the profession with addresses on subjects touching the interest of practitioners who cannot, we think, approve of such arrangements. This is a deliberate attempt to attract a kind of medical practice which there is no excuse for hospitals seeking to attract. The eulogistic notice of the resident medical officer may be permissible in the new code of hospital medical ethics; but if any private practitioner were to be similarly noticed in the local paper of his district he would justly be liable to criticism by our correspondents and by ourselves. We appeal to the staff of Guy's Hospital to protest against this abuse of their great institution, which was founded for the relief of the poor. The evil we describe is a very grave one, and the leaders of the profession will lose all credit for sympathy with their brethren if something is not done to stop it.

DIPHTHERIA IN LONDON.

THE diminution in the fatal cases of diphtheria witnessed in the concluding week of last year has not only not been maintained, but there has been again, as has so often happened in the present prevalence, a marked increase after the very temporary lull. With the close of last week the number of diphtheria patients remaining under treatment in the hospitals of the Metropolitan Asylums Board was, it is true, brought down to a unit below 500, as compared with 521, 510, and 521 in the preceding three weeks, and the admissions from 111, 80, and 75 in the same three weeks to 62 last week; but the gain thus made has to be set against a death roll of 50, or 17 in excess of the corrected average. True, this number was six times exceeded in the previous twelve weeks, but the deaths in the last fortnight of December had only been 36 and 35 respectively. Diphtheria in London was last week fatal to the extent of some 23 per cent. of the fresh cases, but little more than one-third of these were admitted to hospital. Enteric fever, on the other hand, was fatal to some 17 per cent. of cases, 24 per cent. of which found their way to hospital. Of the 50 diphtheria deaths 30 occurred in children aged from one to five years, and included 5 from Hackney, 4 each from Kensington, Hammersmith, Poplar, and Battersea, and 3 each from Fulham, Islington, Mile-end Old Town, and Greenwich. In Greater London there were 18 deaths, including 5 in West Ham, 3 in Kingston, and 3 in Romford, as well as 1 each in Tottenham and Hornsey.

COLLECTIVE INVESTIGATION UPON THE SERUM TREATMENT OF DIPHTHERIA.

THE editors of our enterprising contemporary, the *Deutsche Medicinische Wochenschrift*, Drs. Eulenberg and Schwalbe, have initiated a plan for the collective investigation of the experiences of the medical profession regarding the treatment of diphtheria by antitoxin. They point out that the results so far published from private practitioners, as well as those from hospitals, speak favourably of a method which may prove to be of the highest importance in therapeutics—a method which has impressed even the most critical, as exemplified in Professor Virchow's declaration that it is the duty of every practitioner to employ it in this disease. They say that scepticism is never more legitimate than in respect to the alleged efficacy of treatment, especially of any treatment that claims to be specific, and that diphtheria affords scope for arriving at a correct judgment upon the results of treatment; but the number of points to be determined are exceptionally numerous and involve many considerations such as can only be gathered on a large scale and over a large area. The question must embrace facts from thousands of cases collected from all sources and from all parts of the

country: hence the idea to undertake a collective investigation throughout Germany similar to that pursued in influenza by the Berlin Society of Internal Medicine, on the lines originated by the British Medical Association. In this scheme they have the support of Drs. Leyden, Litten, Renvers, Heubner, Behring, Ehrlich, and Guttstadt. The cards to be filled up by practitioners can be obtained from the office of the journal. It is proposed to close the inquiry on April 1st, 1895. Whilst expecting no final judgment on the serum question from this inquiry, it is hoped that there will result more certain grounds for its therapeutic employment than hitherto, and that it may serve to solve some doubts as to its value.

"THE LANCET" RELIEF FUND.

THE "Application Form" of THE LANCET Relief Fund will be found in our present issue. It can easily be removed, filled up, and forwarded to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London. We take the opportunity of directing the attention of those of our readers who may have occasion to employ the form or to sign one of the required accompanying certificates to the necessity of carefully noticing the conditions on which applicants become entitled to a participation in the benefits of the Fund.

DEATHS OF THE AGED AND LONGEVITY.

THERE is a certain grimness of humour in the persistence with which paragraphists, on the advent of cold or foggy weather, which is invariably fatal to many old people, summarise the deaths of octogenarians and nonagenarians announced in the obituary columns of the daily press and head their paragraphs "Longevity." It is, to say the least, paradoxical that exceptional mortality among the aged should be referred to as evidence of longevity. An industrious correspondent of a contemporary recently reported that the obituary columns of that paper during 1894 announced the deaths of 196 nonagenarians, of whom 89 were males and 107 were females; and, as is usual in these communications, the correspondent adds that their "aggregate ages were 18,203 years." It is such useless figures as these that bring discredit on statistics. They convey no definite idea and do not even suggest whether we should be struck with the number being high or low. Probably not many of these paragraphists and correspondents have the slightest idea of the fact that at the last census in 1891 no fewer than 9185 nonagenarians were enumerated in England and Wales; and that as, according to the English Life Table, rather more than one of every three living nonagenarians dies annually, it follows that more than 3000 nonagenarians die in England and Wales annually. Of what possible interest, therefore, is it to know that, of the 3000 nonagenarians whose deaths were probably registered in England and Wales in 1894 196 had their deaths announced in any particular obituary column. As evidence, however, of the greater longevity of females it is worth noting that of the 9185 nonagenarians enumerated in 1891 6173 were females and only 3012 were males. The English Life Table, notwithstanding this disparity, shows but slight difference between the rate of mortality of male and of female nonagenarians, although this difference is, of course, in the favour of females.

THE LATE DR. BROWN-SÉQUARD.

THE January number of the *Comptes Rendus de la Société de Biologie* contains an appreciative notice by the President, M. Eugène Dupuy, of the life and work of the remarkable man—certainly one of the most striking figures in the history of experimental physiology and of clinical medicine—whom death a short time ago removed from among us. Born in Mauritius, the son of an American and a Frenchwoman, he lived, as all our readers know, and practised successively in France, the United States, and in this country, passing the last twenty years of his distinguished career once more in Paris, with which city he had always kept up the closest ties. M. Dupuy does full justice to the work of the subject of his address, cosmopolitan and extensive as it was. Dr. Brown-Séquard, according to him, was characterised by an enthusiasm, an acuteness, and in particular a capacity for seeing the bearing of his own observations on other men's difficulties that are rarely met with in combination. In this country he devoted himself chiefly to elaborate investigation into the physiological and pathological working of the nervous system, being one of the original staff of the National Hospital for the Paralysed and Epileptic, and there receiving the coöperation of Sir J. Russell Reynolds, Dr. Hughlings Jackson, and Dr. Buzzard among others. His lectures at this institution, which has no counterpart, says M. Dupuy, except the Salpêtrière in Paris, were published in THE LANCET, and stimulated the scientific study of epilepsy and of paralysis due to disease of the spinal cord which have led to marked advance in our knowledge of those obscure diseases in the last twenty years. As a physiologist, as a physician, and as a man who, through numerous vicissitudes and much trouble, found time to accomplish as much work as would suffice for several men of great capacity, his name will always be held in honour in the world of science. No one can read the graceful tribute of M. Dupuy to his memory without a feeling of admiration for its subject.

THE Home Secretary has consented to receive a deputation from the United Kingdom Police Surgeons' Association this month, on a day to be fixed later. The deputation will bring before him the following points: (1) the inadequate amount of the fees and allowances to medical witnesses attending distant sessions and assizes; (2) the importance of issuing the instructions given to the metropolitan police for the examination of persons charged with criminal assaults on females to all provincial police authorities; (3) the desirability of having a police surgeon appointed in all counties and towns where none at present exists; and (4) to ask that, in the event of medical certifiers of the cause of death being appointed, the interests of police surgeons may be safeguarded.

ON Thursday, Jan. 3rd, Dr. Patrick Heron Watson, F.R.S. Edin., Surgeon-in-Ordinary to the Queen in Scotland, was entertained at a dinner in Edinburgh by his former house surgeons and presented with his portrait, and an album containing the photographs of the subscribers. The portrait was painted by Sir George Reid.

THE Lettsomian Lectures will be delivered before the Medical Society of London on the evenings of Mondays, Jan. 21st, Feb. 4th, and Feb. 18th, by Dr. F. T. Roberts, the announced subject being the Combinations of Morbid Conditions of the Chest.

MR. F. J. WALDO, M.A., M.D. Cantab., D.P.H., medical officer of health to St. George's, Southwark, and to the Inner and Middle Temples, has been appointed Tutor in Public Health to St. Bartholomew's Hospital Medical School.

A CONFERENCE in connexion with the Matrons' Council will be held on Thursday, Jan. 17th, at 8.30 P.M., in the Medical Society's Rooms, 11, Chandos-street, Cavendish-square, when a paper entitled "Infirmary Matrons under the Poor-law" will be read by Miss Mollett, matron to the Royal South Hants Infirmary, Southampton.

CASES TREATED BY THE TALLERMAN-SHEFFIELD DRY AIR BATH AT THE NORTH-WEST LONDON HOSPITAL.[1]

BY J. F. SARJEANT, M.R.C.S. ENG., L.R.C.P. LOND.,
RESIDENT MEDICAL OFFICER.

THE authorities of the North-West London Hospital having at the suggestion of Mr. Mayo Collier kindly consented to submit a series of cases to treatment by the "local and medical dry air bath," the proprietors of that apparatus courteously placed one of their cylinders at the disposal of the medical staff for that purpose, and I give the notes and results obtained during the past two months. It might not be out of place to refer here to the fact that this apparatus was introduced to the medical profession by Mr. Willett at St. Bartholomew's Hospital, in the wards of which institution a variety of cases were treated for two months, after which Mr. Willett detailed the results obtained in a clinical lecture delivered on May 23rd last. Acting upon the suggestions thrown out by the lecturer on that occasion several medical cases were treated. The operation extends over forty minutes at an average temperature of from 240° to 260° F., and may be shortly described as follows. The affected part is placed in the cylinder, which, to save time, has been already heated to a temperature of 150° and is then gradually raised. The system of heating and ventilation admits of the air in the cylinder being kept practically dry throughout the operation, thereby enabling a very high temperature to be borne by the patient, in one instance at St. Bartholomew's Hospital reaching 300°, whilst temperatures from 270° to 280° are by no means unusual. Under treatment patients experience a sense of comfort, probably due to the high temperature exercising an anodyne influence, which relieves the pain, or more often removes it entirely; even when adhesions have been broken down the pain is much modified if the joint is immediately subjected to treatment. Some of the cases can hardly fail to be of interest, being of that chronic character for which so little can be done by ordinary medical treatment; all of them were selected for their severity in order to test to the utmost the value of the apparatus; the majority were cured and the remainder exhibited such marked improvement that it is only fair to state that there was not a single failure. Mr. Lewis A. Tallerman kindly gave his personal attention during the treatment, and Mr. Mayo Collier supervised the selection of the cases.

CASE 1. *Sprain.*—A child eleven years of age. The right ankle and foot were swollen, tender, and painful, with great pain on movement and inability to put the injured foot to the ground. There was a good deal of effusion, both into the tendon sheaths and into the joint itself.—First operation (Aug. 13th), forty minutes: the pain was found to have almost disappeared, there was considerably less effusion, and the foot could be put to the ground.—Second operation (14th), thirty-five minutes: further improvement, with power to flex and extend the ankle.—Third and last operation (16th), thirty minutes: the effusion was entirely absorbed, the patient could walk well and without pain. He was discharged as cured.

The result of the treatment in this case was very satisfactory, a severe sprain having been cured after three operations given in four days, the temperature of the cylinder varying from 200° to 220° F.

CASE 2. *Acute attack of gout following sprain of right ankle.*—A man fifty-seven years of age. The patient sprained his right ankle on Aug. 11th by striking it against a stack of iron. On the day after the injury he had a typical attack of gout in the great toe of the injured foot, and stated that he had been unable to sleep for two nights and was in great pain. On examination the right ankle and foot were very much swollen, the ankle-joint was filled with fluid, and the entire surface reddened and shiny. Acute tenderness was present over the whole foot, especially over the tarso-metatarsal joint of the great toe. All movements were painful and the foot could not be put to the ground.—First operation (Aug. 14th) forty minutes: after the bath the pain and tenderness to pressure and movement had gone from the ankle-joint and the pain and tenderness in the great toe were much modified.—Second operation (15th), thirty minutes: the patient had passed a good night, and after the operation he was able to stand.—Third operation (20th), thirty minutes: on examination there was no pain or tenderness on movement or pressure, and the patient was able to walk; some redness still remained.—Fourth operation (21st), forty minutes: the swelling was almost gone; no pain or tenderness was present.—Fifth operation (23rd), forty-five minutes: the patient reported that he had been able to walk for twenty minutes without pain; all effusion had disappeared and the ankle and great toe were now freely movable and without pain. Being considered in a fit state to resume his ordinary duties he was discharged.

The temperature in this case was maintained at from 230° to 240° F., and the result obtained was most satisfactory. The pain was relieved almost at once, the effusion rapidly disappeared, and the patient was cured of a bad attack of gout with a severe sprain in twelve days.

CASE 3. *Chronic rheumatoid arthritis.*—A woman sixty-four years of age. Both knees, shoulders, and wrists, and all the finger-joints were affected. The patient had been under hospital treatment for four years without improvement—four months at the University College Hospital and two years under Dr. Sibley at the North-West London Hospital. On examination all the finger-joints were found to be enlarged and painful, and there was great limitation of movement, the patient not being able to flex the fingers on the palm. The movement of both wrists was limited and painful. The right elbow was fixed at a right angle, and any attempt at movement caused great pain. Both knees and shoulders were enlarged and painful, and distinct grating could be felt on movement. This patient was first treated in the hot air cylinder on Aug. 10th. After the first operation it was noticed that the pain was considerably less and the joints showed marked improvement. After the fourth operation the patient, who had been unable to work at her business for eighteen months, was again able to use her needle. After the fifth operation the right arm could be fully extended without pain, and with a little pressure the fingers could be flexed on the palm. The left hand and arm also showed marked improvement, although they had not been treated in the cylinder. After the eighth operation, with the exception of the first finger, in which a little stiffness still remained, all the fingers closed readily. On Aug. 24th, after the ninth operation, the patient reported having resumed her former occupation and her ability to walk up and down stairs without pain. The patient has been kept under treatment up to the present date and shows continued improvement. The average length of each operation was about forty minutes, and the temperature was averaged 240° F.

This case of chronic rheumatoid arthritis had been under continual medical supervision from its onset and the usual remedies were applied. Its history shows that, so far from yielding to treatment, the disease made rapid strides; so much so that whereas eighteen months ago the patient was able with some effort to follow her occupation of dressmaker, twelve months later she was incapacitated from even feeding or dressing herself. The improvement wrought by the hot dry air cylinder was as immediate as it was remarkable; the progress of the disease was arrested, and a curative process was set up at the first operation, which became more manifest with every succeeding one, proving beyond doubt the value of the treatment in cases of this nature.

CASE 4. *Old tuberculous knee-joint.*—The patient was twelve years of age. In this case the knee-joint had been kept at absolute rest in plaster of Paris for upwards of seven months. On removing the splint the disease was found to have disappeared, leaving little or no movement, any attempt to increase it causing severe pain. After six operations the movement had increased from 45 to 50 degrees, there was no grating in the joint, and the patient could walk freely and well; no forcible movement was used. The temperature in the treatment of this case rose to 220° F.

CASE 5. *Chronic ulcer of leg.*—A woman forty-five years of age. The patient had suffered from chronic ulcer of the right leg for the last five years. She was treated at the North-West London Hospital as an out-patient without improvement, and was an in-patient at the Temperance Hospital for six weeks, at the end of which time the ulcer was healed. Two years ago the ulcer broke out again after a fall and had been getting worse ever since. On examination a large unhealthy ulcer about the size of the palm of the hand was found on the front of

[1] Inquiries respecting the above-mentioned apparatus should be addressed to the secretary, Mr. M. St. B. Prichard, at the offices of the proprietors, 1 and 2, Chiswell-street, Finsbury-square, London, E.C.

the right leg above the ankle; the edges were unhealthy and the base was covered with thin white slough. There was a loss of tissue of about $\frac{5}{16}$ in. in depth. The patient was treated twice in the hot dry air cylinder, each operation averaging thirty-five minutes, at a temperature up to 245° F. The base of the ulcer was then found to be much cleaner and the margins showed signs of healing. About fourteen days later the patient was seen by Mr. Mayo Collier, who found that the lost tissue was replaced, the ulcer had filled up, the margins showing further unmistakable signs of healing.

CASE 6. *Chronic rheumatoid arthritis.*—A man seventy-one years of age. The disease was of twelve months' duration. Both elbows and all the joints of the fingers were stiff and painful, so much so that it was with the greatest difficulty that he continued to work at his trade. After five operations the improvement in this case, both as to pain and stiffness, was so marked that he was enabled to go to his work without inconvenience.

CASES 7 AND 8. *Sprains.*—The first of these cases was that of a man twenty-two years of age and the second that of a man twenty four years of age suffering from sprained ankles with the usual severe symptoms. Each was treated on five occasions with most satisfactory results. The pain in both cases had disappeared after the second operation and the joints were quite sound after the fifth.

Remarks.—It must be confessed that the results obtained by the usual treatment in cases of chronic stiffness of joints are far from satisfactory, so that one is inclined to welcome all the more cordially a recent therapeutic method which claims, and apparently with justice, to remove, at least in part, this reproach from surgery. The Tallerman-Sheffield local dry hot air bath is an invention by which dry air at temperatures from 250° to 300° F. is applied to a portion of the body, such as hand or foot, knee or elbow, an arm or leg. In May of last year Mr. Alfred Willett delivered a clinical lecture at St. Bartholomew's Hospital on some cases which he had treated by this method; and the present list consists of a series of eight cases in which this bath was employed at the North-West London Hospital, under the care of Mr. Mayo Collier. The bath itself consists of a copper cylinder, varying in size and shape according to the part to be enclosed. At one end the limb enters, surrounded by rubber sheeting, and the other is closed by a movable cap working on a pivot, by the use of which, and outlets at the top and bottom of the cylinder, it is found possible to keep the air in the chamber practically dry throughout the operation, notwithstanding the moisture thrown off by the limb enclosed, and instant relief can be afforded the patient if the temperature causes any discomfort. The cylinder is heated by gas burners placed underneath. Precautions are taken to prevent the skin from coming into contact with the heated metal. Mr. Willett's conclusions are decidedly in favour of the treatment in certain cases, and his results may be summarised as follows. The first effect of the heat is to induce a copious diaphoresis; and the circulation of the blood in the part is enormously increased, as is well shown by the bright redness of the limb when removed from the bath. The anodyne effect is often remarkable; pain is generally not only relieved but entirely removed, so that the patient expresses the great relief he feels and moves the limb with much greater freedom and with much less pain. The cases that appear the most likely to be relieved by the treatment are sprains, stiff joints (where there are no very strong adhesions), flatfoot, gonorrhœal rheumatism, acute and chronic gout, chronic ulcers, and rheumatism. It deserves also to be employed for its anodyne effect after forcibly breaking down under an anæsthetic adhesions which have formed in or around a joint; if the limb be placed in the cylinder the pain, which is generally severe, is greatly lessened and the secondary stiffness is much diminished. Mr. Willett was of opinion that but little assistance would be afforded by this bath in overcoming firm, fibrous, articular adhesions. Sooner or later the adhesions will have to be forcibly broken down under an anæsthetic, but, such having been done, I think the recovery will in many cases be hastened by the subsequent use of the heated cylinder. In other words, while facility in active movements is immensely increased, the range of movement is not extended to any great amount. The results obtained in the cases treated at the North-West London Hospital endorse the favourable opinion of Mr. Willett, and the benefit to be derived in rheumatic arthritis is shown in two cases, and in gout in one. The general effect of the baths is marked, but apparently in no way injurious. The entire skin is relaxed and perspires freely, and pain is relieved in joints other than those enclosed in the cylinder.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

[*This report appeared in our Second Edition last week.*]

A MEETING of the Fellows of the Royal College of Surgeons of England was held on Thursday, Jan. 3rd, the President, Mr. J. W. Hulke, F.R.S., being in the chair.

The Chairman reported that, in reply to the resolution adopted at the last meeting of Fellows requesting the Council to take steps for obtaining the opinion of the Fellows on the mode of election to the office of President, the Council on July 30th last adopted the following resolution—viz.: "That the Council are not prepared at the present time to consult the Fellows, or solicit their opinion through other means than the meetings of Fellows. They, however, point out that if any Fellow is anxious to test the opinion of the general body as to whether it is desirable to make any change in the present mode of election of the President it is open to him to submit a motion on the question to the meeting of Fellows in January or subsequently."

Mr. Herbert W. Page, on behalf of the Society of Fellows, communicated the result of a canvass, made by the Society, of all Fellows resident in Great Britain upon the mode of election to the office of President. Three propositions were suggested:—

1. That the President should be elected by the Fellows.
2. That the President should be nominated by the Council and elected by the Fellows.
3. That the President should be elected by the Council as at present.

A thousand voting papers were sent out and 468 papers were returned, but of these 50 were useless. For the first proposition, 112 voted; for the second, 156; and for the third, 150.

Mr. Page considered that the result of the canvass indicated that no alteration in the present mode of election was desired by the great body of Fellows.

Mr. Craven saw no reason for any change.

Mr. Rivington considered that the canvass was decidedly in favour of a change, as 268 Fellows voted for the first and second propositions; he was decidedly in favour of a similar canvass of the Fellows being taken by the Council.

Mr. Howard Marsh said that the Council were often asked to make changes which were *ultra vires*, and contended that they always worked earnestly for the good of the College.

Mr. Bell of Rochester was in favour of a nomination by the Council and an election by the Fellows.

Mr. Howse saw great difficulties in any form of nomination by the Council and election by the general body of Fellows.

Mr. W. H. Bennett then moved: "That the Council be requested to appoint a Conjoint Committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new Charter, together with the details thereof." He thought that the question whether a new Charter was needed or not should be settled once for all; he contended that the resolution was in no way antagonistic to the Council.

Mr. Holmes seconded the resolution, and said that it was very important that the general body of Fellows should have a voice in determining any vital change in the constitution of the College and its relations to other public bodies.

The President said it appeared to be forgotten that the Council had already pledged itself to bring all important matters before the Fellows before coming to a decision on them.

On being put to the vote, the resolution was carried, 22 voting in its favour and 14 against.

The resolution standing in Mr. F. J. Gant's name was now brought forward, being almost identical with that just voted on.

In a few concluding words the President regretted that the resolutions brought forward at these meetings dealt only with the constitution of the College, and did not deal

with educational matters, which were really of much more pressing importance.

Forty-six Fellows were present altogether, but the meeting had assembled some minutes before the quorum of thirty was obtained.

SANITATION AT THE CAPE OF GOOD HOPE.

THE annual report for 1893 on the public health of the Cape, which Dr. A. J. Gregory has, by command of the Governor, presented to both Houses of the Cape Parliament, contains much interesting matter. It is framed somewhat on the lines of a county medical officer's report in this country—i.e., it consists of a comprehensive digest of the sanitary condition and requirements of the colony as culled from the reports of the district surgeons and other sources, while in the appendix the district reports are given in full. The care of the public health by the Cape Government is, Dr. Gregory remarks, an affair of but very recent development; indeed, it was not until the year 1891 that a separate Local Government and Public Health Department was organised, and only during the session of 1892 did the Cape Parliament vote a sum of money for procuring expert advice and guidance upon sanitary matters. Under circumstances such as these it is hardly to be expected that the public health service of the colony should be other than somewhat embryonic. The department has as yet no power by which it can compel sanitary authorities to carry out their obligations, such as is possessed by the Local Government Board in this country, and the difficulties in the way of obtaining reliable information as to the vital statistics of the several districts are enhanced by the absence of any proper system of registration of births and deaths, and of notification of infectious diseases. The Public Health Department communicates by letter with sanitary authorities in reference to the more urgent requirements of their district, but in some cases the communications are not even acknowledged by the authorities in question; and a comparison of the district reports of 1892 with those of 1893 shows that but very few reforms have been effected in the interval. Only a very small proportion of the sanitary authorities in the colony have provided anything in the shape of isolation accommodation; but we are glad to see that there is a prospect of proper provision being obtained by the several authorities of the Cape peninsula, both in regard to small-pox and other infectious diseases. The provisions of the Contagious Disease Prevention Act, 1885, have, where carried into operation, resulted in diminished venereal disease both among prostitutes and the Imperial forces; it seems, however, that in Capetown itself there exists a large amount of irregular or casual prostitution which is not reached by the Act. In dealing with the communicability of syphilis Dr. Gregory refers to the remarkable manner in which the disease seems to spread from person to person under the conditions in which the native population live, altogether apart from the direct effect of sexual intercourse, and he quotes from several of the district reports cases in which Europeans have contracted the disease from the native servants and children. For instance, the district surgeon of Calitzdorp remarks that, of 36 European cases in his district, only 4 can be said to have contracted the disease through immorality, the remaining 32 having been directly or indirectly inoculated from coloured persons. By way, too, of demonstrating the heavy incidence of the disease upon innocent children Dr. Gregory divides those affected with syphilis into two groups—those above and those below fourteen years of age; and he assumes that in the latter group the disease is always innocently contracted. He found as a result of his analysis that 35 per cent. of the whole number were children under fourteen years of age. Again, the district surgeon of Oudtshorn remarks that the disease is often conveyed between children using the same spoon or the toy known as a mouth-organ.

In regard to leprosy some interesting tables are furnished in Dr. Gregory's report, and from these he concludes that—(1) leprosy is five or six times more prevalent among natives and coloured persons than among whites; (2) Europeans appear to be less frequently affected in those districts in which the native element is less likely to be intimately associated with the European; and (3) the prevalence of the disease increases in direct ratio to the density of the population. These conclusions, Dr. Gregory observes, seem to point to the contagiousness of leprosy, and also to the fact of the contagiousness being slight in comparison with other infectious diseases, as otherwise the disease would long ago have disseminated itself fairly evenly throughout the colony.

Small-pox was introduced into the colony during 1893 by several of the mail steamers from England, and quarantine was extensively resorted to in order to check its spread. Much delay, inconvenience, and expense were occasioned, but it is satisfactory to learn that as a result of the alarm produced by the presence of small-pox a decided impetus to sanitation was given throughout the colony. The occurrence has, Dr. Gregory remarks, been very instructive, and it suggests, he says, among many other points, the question as to whether a system of medical inspection, proper disinfection, isolation, &c. might not be substituted for the cumbersome and costly machinery of quarantine.

The Cape Government has ceased to import calf lymph from England owing to the fact that the lymph, on account either of the excessive heat or delay in transit, was often inert when used, and a calf vaccine station has been started at Grahamstown. Epidemic pneumonia occurred in several districts of the colony during 1893, and in Kimberley 365 deaths were attributed to the disease. Puerperal fever seems to have been rife in many districts, and ignorant midwives were frequently instrumental in spreading the disease.

In concluding his report Dr. Gregory urges upon the Government the absolute necessity which exists for legislative measures "investing a central authority with power to supervise and guide the local authority in the exercise of its functions; without such powers I am convinced that the public health of the colony can never be properly conserved."

OBSERVATIONS ON THE MEDICAL DEPARTMENT OF THE BRITISH ARMY BY AN OFFICER OF THE UNITED STATES MEDICAL SERVICE.

WE recently very briefly adverted to Brevet Lieutenant-Colonel Woodhull's Observations on the British Medical Service, abridged from an official report and published by authority of the Secretary of War of the United States. These observations are reprinted from the fourth volume of the Transactions of the Association of Military Surgeons of the United States. The writer of this abridged report is a distinguished officer of the American Medical Service, and he is certainly to be congratulated on the ability and accuracy with which he has discharged the duty committed to him. Whilst in England in 1891 he was ordered by the War Department of the United States to make the utmost use of such facilities as might be granted to study the British military hospitals, the army medical school, the duties of medical officers, the sanitary administration of barracks and camps, the instruction service of the Medical Staff Corps, and the system of physical training in the British army. It will be seen that the scope of his inquiries was sufficiently comprehensive, and he has evidently been indefatigable in his efforts to obtain a good firm grasp of his subject. The results are embodied in the abridged report before us. It is surprising what an amount of well-arranged information Colonel Woodhull has managed to incorporate in a condensed form in this report, which should, and probably will, be extensively read by medical officers of the British service. Sydney Smith humorously traced how taxation shadowed every step and stage in the career of a British subject, and Colonel Woodhull has, it may be said, in a similar manner traced the British soldier from the cradle to the grave; he has described and analysed our army medical regulations, our service customs and practices, as contrasted with those of his own service, and in a running commentary frankly reviewed our methods in an honest, independent spirit, but always in excellent taste.

From what we have said it will be seen that it is impossible, nor indeed is it necessary, to accompany Colonel Woodhull through all his inquiries and comments; we can only attempt to select a few points. Passing over his general remarks on the strength and organisation of the British medical department, the entrance examination and the course

at Netley, and the system of promotion in the various grades and the duties assigned to each of them, he points out, *en passant*, some minor practical differences between the medical service of this country and that of the United States, and adverts to the subject of the roll of married soldiers in the British army, which, judged by any ordinary measure of a combatant force, is, he says, enormous and draws deeply on the medical as well as on the other sources of the establishment. Much consideration is given to the subject of diets in British and American army hospitals and the different systems on which these are based respectively. The dietary of the United States hospitals is, it may be mentioned, very liberal and varied, and it is so different from that of our army that no useful comparison can well be made. Speaking of medical history sheets—which we regard as excellent and most useful documents in our service, with its soldiers serving in all parts of the world—Colonel Woodhull does not, on the whole, and for the reasons he gives, think that their adoption in the American service would be attended with any great advantage. As regards the nursing sisters of our service, he says that he formed a very favourable impression of this trained section of the nursing staff. Alluding to the functions and authority of the director-general, he remarks that these greatly transcend those of the surgeon-general of the United States army, and he goes on to make some judicious remarks on promotion by selection and seniority. "By restraining promotion in the lower and medium grades to seniority, moderate ambition and moderate abilities are satisfied; and opening the higher ranks to choice presents a stimulus for exertion, and relieves the administrative positions from the inertia and indifference that sometimes accompany age." Colonel Woodhull has a good deal to say about recruiting, and particularly about the Medical Staff Corps. Like anybody else who has any practical knowledge of the subject, he is opposed to the limitations of stature now in force for the men of this corps, unfitting them as they do for the work they will have to perform in war. His comments on the Aldershot system of training of the Medical Staff Corps are very favourable, although he considers that in several particulars the methods pursued in the United States Service are simpler and better adapted to the general end in view, and therefore to be preferred. In connexion with this subject we may say that Colonel Woodhull expresses his surprise that the Army Medical Service and Medical Staff Corps are not more practically utilised at our autumn manœuvres than they are.

Colonel Woodhull also considers that his army service has nothing to acquire from Great Britain in the system of tentage, whether considered for shelter, artificial warmth, convenience of transport, or adaptability to campaigning purposes.

Speaking of our barrack-rooms, he thinks that the men can hardly be warm enough for comfort, and this is a matter in which they would certainly agree with him, for the insufficient allowance of fuel and the draughty nature of these rooms in cold weather are common complaints with soldiers.

Referring to the subject of medical and sanitary instructions for field service, we are glad to notice that he gives some extracts from those issued in this country for the Suakin Expedition, which he very highly commends for their scope, intrinsic value, and general usefulness, expressing at the same time his regret that he failed to note the name of the officer who prepared these valuable memoranda. We may here incidentally remark that THE LANCET drew special attention to the excellence of these instructions at the time they were issued. Colonel Woodhull devotes much consideration to Netley and to the value of such an institution to the State and the army. Although the courses at Netley and Aldershot overlap in some respects, he holds that, taken as a whole, "they are both admirable, and are strongly commended for our imitation."

With reference to the various forms of transport for wounded he saw nothing as regards comfort and economy of force and the requirements of the American army to approach the travois and the Baily litter.

Colonel Woodhull's remarks on gymnasia and the physical training of the British soldier strike us as pertinent and good. The physical development of the soldier, in whom the fighting instinct is naturally strong, gives to the British army, he says, much of the formidableness it possesses, notwithstanding certain deficiencies in the original material and other incidental conditions of the service.

But here we must stop, contenting ourselves with hoping that we have said enough to show that the report under review is both interesting and instructive, and consequently well worth reading.

THE CLUB SYSTEM IN CORK.

(FROM A CORRESPONDENT.)

FOR a number of years it has been a standing grievance with the profession in Cork that amongst the members of the Odd Fellows and kindred societies are many who are well able to pay ordinary medical fees, amongst them being owners of large business establishments. The secretaries and individual members of these clubs have been privately remonstrated with from time to time, but without effect, the almost invariable reply being: "Those are the very men we wish to get hold of. They give stability to our club. They are not likely to draw sick pay, and that is all the better for our other members." The obvious inference is that the clubs cared little to what extent the medical men were—I had almost said—swindled out of their legitimate fees, provided the funds of the club at the end of the year were benefited to the extent of a few paltry shillings. But what mainly brought matters to a crisis has been the formation in late years of quite a number of clubs bearing such high-sounding names as "medical aid associations." These clubs were formed solely to procure the services of some local practitioner, and he generally received the splendid remuneration of £1 per member per annum, which sum included medical attendance, not alone for the member, but also for his family. It is hardly credible, but yet the fact, that amongst the members of these associations are to be found captains of large steamers, managers of banks, and heads of Government departments. When the medical men eventually combined to resist this intolerable state of affairs resistance came mainly from the older benefit clubs; but the probability is that if the general body of the members of those clubs had been left to their own honourable promptings the difficulty would have been got rid of very quickly. However, such was not the case. At the instance of some of the secretaries whose salaries depend on the number of members a meeting of delegates was held, and one of the latter, who has turned thousands a year in business, denounced the audacious attempt of the medical men to deprive him of the privilege of having himself and his family provided with medical attendance and medicines for the very handsome sum of 15*s.* per annum, or 3½*d.* per week. The eloquence of such interested gentlemen, I regret to say, prevailed with the working men, who form a large proportion of those clubs. The newly formulated rules of the medical men were contemptuously sent back to them, and surprise was afterwards expressed because this silly impertinence was treated by the medical men with dignified silence. Whilst harmless talking has been done by a section of the club members the medical men have quietly perfected their organisation, and, with a solitary exception, they are united in one solid phalanx. Though they have not the slightest objection to see working men and clerks with small salaries in clubs, yet they are quite determined to put an end to any system which will permit gentlemen in receipt of £600, £800, or £900 a year to claim medical services for 15*s.* or £1 per annum. It seems to be the merest question of "live and let live." It must be said that it is highly creditable to the profession in Cork that there is only one of their number who stands aloof from their organisation. This gentleman is, I understand, quite a recent importation, and there is no doubt the spirited representatives of the profession in Cork can well afford to ignore his action, which can hardly be regarded as calculated to improve the status of the profession of which he happens to be a member. The temptations to outsiders to follow his example are not very alluring. It has been calculated that after deducting the cost of medicines less than £500 a year has been received by the profession from twenty of the ordinary benefit clubs, including Foresters, Odd Fellows, &c., though members of those clubs have been deluging the local newspapers with statements that their societies paid thousands a year to the medical practitioners of Cork. Already one of the principal medical aid associations has been voluntarily wound up, without waiting for the advent of the new year, when the rules of the profession are to come into force. Some of the benefit clubs have also taken time by the forelock and intimated their intention of meeting the wishes of the medical men; and now that

the rank-and-file of those clubs realise that the medical men have really no contest with them and merely wish to insist on the well-to do members of those clubs paying for medical services in accordance with their means it is expected that the new year will be yet young when the public opinion of Cork will insist that meanness amongst a certain class of the citizens will be stamped out and that the eminent services of the Cork medical practitioners should be recognised by fair and just remuneration.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIS society has been formed to continue the work of the late Association of Members of the Royal College of Surgeons of England, and will have the following objects:—

1. To arouse and maintain among the Members a permanent interest in their College by giving them a share in its management.

2. To promote the acquisition of a Charter by the College, which shall permit the Members to take some part in the election of the Council.

3. While seeking primarily to further the interests of the Members, to support and coöperate with the Fellows' Societies in obtaining such reforms in the by-laws as are possible under the present Charter.

4. Generally to promote the welfare of the corporation by bringing its at present somewhat inharmonious constituents of Council, Fellows, and Members into united action.

The committee consists at present of Mr. Joseph Smith (chairman), Dr. Danford Thomas, Dr. F. H. Alderson, Mr. Brindley James, Mr. George Brown, Mr. Nelson Hardy, Mr. Thomas Morton, Mr. J. C. Smith, and Mr. W. G. Dickinson, with power to add to their number. The annual subscription is half-a-crown, and the hon. secretary, Mr. W. G. Dickinson, Southfields, London, S.W., will be glad to receive the names of Members wishing to join the Society.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7410 births and 3844 deaths were registered during the week ending Jan. 5th. The annual rate of mortality in these towns, which had declined in the preceding four weeks from 20·2 to 18·0 per 1000, rose again last week to 18·9. In London the rate was 17·4 per 1000, while it averaged 20·0 in the thirty-two provincial towns. The lowest rates in these towns were 14·1 in Cardiff, 14·5 in Halifax, 14·6 in Plymouth, 15·2 in Bradford, and 15·5 in Blackburn; the highest rates were 24·0 in Brighton, 24·1 in Leeds, 24·3 in Wolverhampton, 24·5 in Preston, and 25·0 in Gateshead. The 3844 deaths included 399 which were referred to the principal zymotic diseases, against 392 and 385 in the preceding two weeks; of these, 125 resulted from measles, 87 from diphtheria, 63 from whooping-cough, 45 from diarrhœa, 41 from "fever" (principally enteric), 35 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases occurred in Plymouth; in the other towns they caused the lowest death-rates in Cardiff, Brighton, and Manchester, and the highest rates in Portsmouth, Preston, Leeds, Gateshead, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Derby, Leeds, Newcastle-upon-Tyne, Gateshead, Preston, and Portsmouth; from scarlet fever in Salford; from whooping-cough in Sunderland, Wolverhampton, and Blackburn; and from "fever" in Birkenhead. The 87 deaths from diphtheria included 50 in London, 5 in Birmingham, 4 in Leeds, 4 in Sheffield, and 3 in West Ham. Two fatal cases of small-pox were registered in Birmingham and 1 in Liverpool, but not one in London or in any other of the thirty-three large towns. There were 23 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 5th inst., against 22, 15, and 16 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 3, 0, and 1 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1779, against 2034, 1931, and 1890 on the preceding three Saturdays; 128 new cases were admitted during the week, against 161 and 116 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 325 and 332 in the preceding two weeks, declined to 319 last week, and were as many as 449 below the corrected average. The causes of 76, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Leeds, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Huddersfield, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·7 and 22·1 per 1000 in the preceding two weeks, declined again to 21·8 during the week ending Jan. 5th, but exceeded by 2·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·9 in Paisley and 14·6 in Dundee to 24·0 in Perth and 24·6 in Glasgow. The 630 deaths in these towns included 38 which were referred to measles, 11 to diphtheria, 9 to whooping-cough, 8 to scarlet fever, 8 to diarrhœa, 5 to "fever," and 2 to small-pox. In all, 81 deaths resulted from these principal zymotic diseases, against 111 and 86 in the preceding two weeks. These 81 deaths were equal to an annual rate of 2·3 per 1000, which was 0·8 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 32, 54, and 41 in the preceding three weeks, further declined to 38 last week, of which 18 occurred in Glasgow, 13 in Aberdeen, and 3 in Paisley. The deaths referred to diphtheria, which had been 10 and 4 in the preceding two weeks, rose again to 11 last week, and included 5 in Glasgow, 2 in Aberdeen, and 2 in Perth. The 9 fatal cases of whooping-cough showed a marked decline from the numbers recorded in recent weeks, and included 7 in Glasgow. The deaths from scarlet fever, which had declined from 12 to 8 in the preceding four weeks, were again 8 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. The 2 fatal cases of small-pox were registered in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 142 and 138 in the preceding two weeks, rose again to 154 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 52, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding three weeks from 27·1 to 25·4 per 1000, rose again to 29·3 during the week ending Jan. 5th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·5 per 1000, against 16·6 in London and 19·6 in Edinburgh. The 190 deaths registered in Dublin during the week under notice showed an increase of 20 upon the number in the previous week, and included 10 which were referred to the principal zymotic diseases, against 22 and 21 in the preceding two weeks; of these, 5 resulted from small-pox, 2 from "fever," 2 from diarrhœa, and 1 from whooping-cough, but not one from measles, scarlet fever, or diphtheria. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·8 in London and 1·7 in Edinburgh. The fatal cases of small-pox, which had been 5, 6, and 10 in the preceding three weeks, declined to 5 last week. During last quarter no fewer than 51 deaths resulted from small-pox in Dublin, of which 27 were registered during the last four weeks of the year. The deaths referred to different forms of "fever," which had been 4, 7, and 3 in the preceding three weeks, further declined to 2 last week. The 190 deaths in Dublin last week included 21 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Seven inquest cases and 6 deaths from violence were registered; and 70, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1894.

IN the accompanying table will be found summarised

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—DECEMBER, 1894.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1894.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	**4,349,166**	**17**	**1051**	**789**	**2**	**519**	**16**	**10**	**387**	**—**	**2791**	**8·4**	**2**	**149**	**59**	**176**	**83**	**—**	**94**	**—**	**46**	**614**	**1·8**	**5906**	**17·7**	**140**
West Districts.																										
Paddington	121,583	—	7	25	—	17	1	—	6	—	56	6·0	—	6	—	1	1	—	5	—	—	13	1·4	153	16·4	149
Kensington	167,350	—	25	24	—	20	1	—	13	—	83	6·5	—	5	1	7	1	—	5	—	2	21	1·6	189	14·7	226
Hammersmith	105,696	—	15	16	—	11	—	—	6	—	48	5·9	—	4	2	5	2	—	2	—	1	16	2·0	141	17·4	157
Fulham	110,993	—	53	45	—	8	—	1	5	—	112	13·2	—	6	5	9	3	—	—	—	—	23	2·7	143	16·8	133
Chelsea	99,052	—	14	24	—	13	—	1	8	—	60	7·9	—	2	—	3	2	—	—	—	1	8	1·1	133	17·5	169
St. George Hanover-square	75,033	—	8	7	—	15	2	—	2	—	34	5·9	—	—	1	1	1	—	2	—	—	5	0·9	82	14·2	98
Westminster	54,414	—	16	5	—	10	—	—	1	—	32	7·7	—	—	1	3	2	—	2	—	—	8	1·9	85	20·4	147
St. James Westminster	25,571	—	11	5	—	6	—	—	—	—	22	12·2	—	—	—	—	2	—	2	—	1	5	2·8	42	23·2	147
North Districts.																										
Marylebone	138,554	11	25	18	—	32	—	—	14	—	100	9·4	2	—	3	4	3	—	2	—	—	14	1·3	184	17·3	90
Hampstead	75,443	—	17	5	—	8	—	—	1	—	31	5·4	—	1	2	—	—	—	1	—	—	4	0·7	59	10·2	93
St. Pancras	233,739	1	77	26	—	25	1	—	23	—	153	8·5	—	2	4	8	4	—	3	—	3	24	1·3	320	17·9	155
Islington	331,900	—	98	42	—	39	—	—	19	—	198	7·8	—	1	4	16	12	—	4	—	2	39	1·5	421	16·5	129
Stoke Newington	34,172	—	1	2	—	3	—	—	2	—	8	3·1	—	—	1	—	—	—	1	—	1	3	1·1	18	6·9	35
Hackney	211,493	—	45	48	—	25	—	—	16	—	134	8·3	—	6	2	8	1	—	8	—	1	26	1·6	261	16·1	101
Central Districts.																										
St. Giles	28,144	—	2	3	—	8	—	—	3	—	16	5·5	—	1	—	1	1	—	1	—	—	4	1·4	67	22·9	167
St. Martin-in-the-Fields	13,783	—	1	1	—	4	—	—	2	—	8	7·6	—	—	—	—	1	—	—	—	—	1	0·9	16	15·1	200
Strand	23,179	—	3	4	—	7	—	—	1	—	15	8·4	—	—	—	—	1	—	4	—	—	5	2·8	49	27·6	109
Holborn	32,438	—	8	5	—	4	—	—	7	—	24	9·6	—	—	—	1	—	—	—	—	1	2	0·8	34	13·7	86
Clerkenwell	65,312	—	8	13	—	5	—	—	8	—	34	6·8	—	1	—	3	2	—	1	—	—	7	1·4	85	17·0	95
St. Luke	41,168	—	10	5	—	5	—	—	8	—	28	8·9	—	1	—	—	7	—	—	—	—	8	2·5	99	31·3	170
City of London	34,832	—	1	3	—	8	—	—	1	—	13	4·9	—	—	—	—	—	—	1	—	—	1	0·4	52	19·5	108
East Districts.																										
Shoreditch	123,186	—	36	18	—	9	—	—	20	—	83	8·8	—	4	—	1	7	—	2	—	1	15	1·6	174	18·4	123
Bethnal Green	129,840	—	34	34	—	11	1	—	22	—	102	10·2	—	4	2	6	—	—	1	—	1	14	1·4	180	18·1	132
Whitechapel	75,498	1	14	20	—	6	—	—	7	—	48	8·3	—	4	3	2	—	—	4	—	—	13	2·2	129	22·3	141
St. George-in-the-East	48,360	—	12	13	—	7	—	—	4	—	36	10·3	—	—	—	4	2	—	—	—	1	7	2·0	82	23·6	138
Limehouse	57,000	—	13	22	—	5	—	—	2	—	42	9·6	—	2	2	9	1	—	—	—	—	14	3·2	103	23·6	144
Mile End Old Town	108,242	—	35	17	—	11	—	—	12	—	75	9·0	—	1	1	7	1	—	2	—	2	14	1·7	163	19·6	118
Poplar	170,217	2	70	46	—	15	1	1	21	—	156	11·9	—	23	2	5	3	—	3	—	2	38	2·9	252	19·3	161
South Districts.																										
St. Saviour Southwark	26,712	—	4	7	—	—	—	—	3	—	14	6·8	—	—	—	3	—	—	—	—	—	3	1·5	51	24·9	203
St. George Southwark	60,060	1	21	7	—	2	—	—	4	—	35	7·6	—	—	1	2	1	—	—	—	—	4	0·9	109	23·7	204
Newington	118,512	—	21	21	—	14	—	1	10	—	67	7·4	—	—	1	2	5	—	1	—	3	12	1·3	162	17·8	141
St. Olave Southwark	12,984	—	3	3	—	3	—	—	—	—	9	9·0	—	—	—	—	—	—	—	—	—	—	—	12	12·0	81
Bermondsey	84,053	—	26	8	1	8	1	—	6	—	49	7·6	—	—	—	5	2	1	4	—	1	13	2·0	141	21·9	120
Rotherhithe	40,365	—	27	3	1	2	2	—	12	—	47	15·2	—	—	1	2	—	—	—	—	—	3	1·0	57	18·4	153
Lambeth	282,574	—	53	37	—	45	4	1	23	—	163	7·5	—	1	6	14	5	—	9	—	5	40	1·8	362	16·7	148
Battersea	161,558	—	53	36	—	26	—	1	25	—	143	11·5	—	—	4	11	8	—	5	—	4	32	2·6	253	20·4	193
Wandsworth	179,518	—	35	19	—	24	1	—	20	—	97	7·0	—	2	1	5	2	—	4	—	6	20	1·5	194	14·1	125
Camberwell	246,893	—	35	20	—	23	—	2	22	—	132	6·9	—	2	—	12	2	—	4	—	5	25	1·3	318	16·7	156
Greenwich	175,128	—	70	17	—	16	1	2	11	—	117	12·6	—	30	3	12	1	—	3	—	—	49	2·7	237	17·6	120
Lewisham (excluding Penge)	79,905	—	5	11	—	15	—	—	6	—	35	5·7	—	6	—	—	2	—	7	—	—	15	2·4	97	15·8	290
Woolwich	42,369	—	8	5	—	1	—	—	3	—	17	5·2	—	22	—	2	—	—	1	—	1	25	7·7	89	27·4	221
Lee	36,172	—	4	5	—	1	—	—	3	—	13	4·4	—	4	—	1	1	—	1	—	—	7	2·4	50	17·1	132
Plumstead	59,233	—	30	12	—	1	—	—	5	—	48	10·6	—	8	1	4	—	—	—	—	1	14	3·1	58	12·8	161
Port of London	—	1	—	2	—	1	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 38 cases of membranous croup.

† Including deaths from membranous croup.

complete statistics relating to sickness and mortality during December in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 8·4 per 1000 of the population, estimated at 4,349,166 persons. In the preceding three months the rates had been 9·6, 10·0, and 9·5 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hampstead, Stoke Newington, St. Giles, City of London, Lewisham, Woolwich, and Lee; while they showed the largest excess in Fulham, St. James Westminster, St. George-in-the-East, Poplar, Rotherhithe, Battersea, Greenwich, and Plumstead. The prevalence of small-pox in London showed a further decline during December, only 17 cases being notified during the month, including 11 in Marylebone, 2 in Poplar, and 1 each in St. Pancras, Whitechapel, St. George Southwark, and Port of London sanitary areas. The Metropolitan Asylum Hospitals contained 16 small-pox patients at the end of December, against 93, 45, and 31 at the end of the preceding three months; the weekly admissions averaged 3, against 17, 9, and 6 in the preceding three months. The prevalence of scarlet fever in London showed a marked further decline from that recorded in recent months; this disease was proportionally most prevalent in Fulham, St. Pancras, Mile-end Old Town, Poplar, Rotherhithe, Battersea, Greenwich, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1865 scarlet fever patients at the end of December, against 2058, 2207, and 2114 at the end of the preceding three months; the weekly admissions averaged 171, against 245, 246, and 208 in the preceding three months. The prevalence of diphtheria also showed a slight further decline during December; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Chelsea, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Poplar, and Greenwich. There were 521 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of December, against 496, 557, and 517 at the end of the preceding three months; the weekly admissions averaged 93, against 96, 100, and 90, in the preceding three months. The prevalence of enteric fever in London showed a further increase upon that recorded in recent months; among the various sanitary areas this disease was proportionally most prevalent in St. George Hanover-square, Westminster, St. James Westminster, Marylebone, St. Martin-in-the-Fields, Strand, and City of London. Erysipelas showed the highest proportional prevalence in Holborn, St. Luke, Shoreditch, Bethnal Green, Rotherhithe, and Battersea sanitary areas. Two cases of puerperal fever were notified in Camberwell, and 2 in Greenwich sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Dec. 29th, the deaths of 5906 persons belonging to London were registered, equal to an annual rate of 17·7 per 1000, against 14·4, 15·8, and 15·2 in the preceding three months. The lowest death-rates during December in the various sanitary areas were 6·9 in Stoke Newington, 10·2 in Hampstead, 12·0 in St. Olave Southwark, 12·8 in Plumstead, 13·7 in Holborn, and 14·2 in St. George Hanover-square; the highest rates were 23·6 in St. George-in-the-East and in Limehouse, 23·7 in St. George Southwark, 24·9 in St. Saviour Southwark, 27·4 in Woolwich, 27·6 in Strand, and 31·3 in St. Luke. During the four weeks of December 614 deaths were referred to the principal zymotic diseases in London; of these, 2 resulted from small-pox, 149 from measles, 59 from scarlet fever, 176 from diphtheria, 83 from whooping-cough, 94 from enteric fever, and 46 from diarrhœa. These 614 deaths were equal to an annual rate of 1·8 per 1000, against 1·6 in each of the preceding two months. No fatal case of any of these diseases was recorded last month in St. Olave Southwark; in the other sanitary areas they caused the lowest death-rates in St. George Hanover-square, Hampstead, St. Martin-in-the-Fields, Holborn, City of London, and St. George Southwark; and the highest rates in Fulham, St. James Westminster, Strand, Limehouse, Battersea, Greenwich, Woolwich, and Plumstead. Only 2 fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the preceding ten years being 17; these two cases belonged to Marylebone sanitary area. The 149 deaths referred to measles were as many as 126 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Poplar, Greenwich, Lewisham, Woolwich, Lee, and Plumstead. The 59 fatal cases of scarlet fever were little more than half the corrected average number; this disease was proportionally most fatal in Fulham, Whitechapel, and Bermondsey sanitary areas. The 176 deaths from diphtheria exceeded by 30 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Westminster, St. George-in-the-East, Limehouse, Mile End Old Town, St. Saviour Southwark, Battersea, and Greenwich. The 88 fatal cases of whooping-cough were as many as 138 below the corrected average number; this disease was proportionally most fatal in St. Luke, Shoreditch, and Battersea sanitary areas. The 94 deaths referred to enteric fever were 31 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Hackney, Strand, Whitechapel, and Lewisham. The 46 fatal cases of diarrhœa were slightly below the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was no less than 30 per cent. below the average.

Infant mortality in London during December, measured by the proportion of deaths under one year of age to births registered, was equal to 140 per 1000, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, Marylebone, Hampstead, Stoke Newington, Holborn, Clerkenwell, and St. Olave Southwark; and the highest rates in Kensington, St. Martin-in-the-Fields, St. Saviour Southwark, St. George Southwark, Battersea, Lewisham, and Woolwich.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN DOBSON has been posted to the North-Eastern district. Surgeon-Major O'Sullivan has arrived from Singapore. Surgeon-Major Pike has completed a tour of service in Ceylon and embarked for England. The following officers have embarked in the *Victoria* for a tour of service in India: Surgeon-Lieutenant-Colonel Ring, Surgeon-Captains Donnet and Sparkes, and Surgeon-Lieutenant More.

INDIA AND THE INDIAN MEDICAL SERVICES.

1st Bombay Grenadiers: Surgeon-Captain Street, officiating in medical charge, 7th Bombay Lancers, to the Medical Charge, vice Surgeon-Lieutenant-Colonel Wilkins, D.S.O., transferred. 21st Bombay Infantry: Surgeon-Lieutenant-Colonel Wilkins, in Medical Charge, 1st Bombay Grenadiers, to the Medical Charge, vice Surgeon-Major Burroughs, transferred to general duty at his own request. Surgeon-Major Rowney and Surgeon-Lieutenant Austen, just arrived from England, have been posted to general duty Bombay district temporarily. Surgeon-Lieutenant-Colonel Trevor, A.M.S., on arrival from England, has been appointed to the Medical Charge, Station Hospital, Kurrachee. Surgeon-Major W. G. H. Henderson has relinquished charge of the Hyderabad Prison, Surgeon-Captain J. Jackson assuming Charge of the Hyderabad Central Prison.

NAVAL MEDICAL SERVICES.

Surgeon A. G. Wildey has been appointed to the *Wildfire* (additional).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major William R. Smith to be Surgeon-Lieutenant-Colonel. Surgeon-Lieutenant David Todd, 1st Durham Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Fifeshire: Henry William Laing, M.D., to be Surgeon-Lieutenant. The Highland: Surgeon-Lieutenant-Colonel A. Sclanders, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Corps on his retirement. *Rifle:* 1st (Renfrewshire

Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant A. Peacock, M.B., resigns his commission.

THE JAPANESE ARMY MEDICAL SERVICE ORGANISATION AND ARRANGEMENTS.

According to the statement of eye witnesses published in the *Times* and the *Standard* there does not seem to be any doubt that the Japanese forces operating at Port Arthur were guilty of terrible atrocities after the capture of the forts and dockyard of that place. The conduct of the Japanese troops on that occasion has aroused a feeling of righteous indignation and disgust amongst even their well-wishers in Europe, which the Government of Japan will find it very difficult to remove. It shows that the civilisation of the Japanese is but veneer after all. Their intelligence, energy, and enterprise, and their remarkable aptitude in acquiring and applying the results of European science and art cannot, however, be denied. Their medical arrangements during the present war with China, and their hospital organisation at Hiroshima and elsewhere, in connexion with their Red Cross Society and the Army Medical Staff and Medical Staff Corps, seem to have been excellent. In the attack and capture of Port Arthur on Nov. 21st the main body of the attacking force of the Japanese army passed through a small hamlet which was afterwards used by the Japanese Red Cross as one of the chief sites of their advanced field hospital work. The wounded, the special correspondent of the *Standard* writes, were rapidly brought in from the front, placed on straw, and promptly attended to by members of the medical service. The equipment of the Japanese Red Cross is stated to have been excellent. There was a plentiful supply of antiseptic agents and dressings, and all the operations were conducted on the recognised principles of antiseptic surgery of Western civilisation. Labels were attached to the wounded briefly stating the nature of the injury and what had been done before the cases were transferred to the hospitals in the rear, and, in fact, everything was done in accordance with the principles and methods followed in modern war in Europe. The resistance offered by the Chinese was small and ineffective, and there was, no doubt, no great strain on the Japanese medical organisation and arrangements; still the work was well done and very creditable to the Japanese service. With the small total of casualties of 29 officers and men killed and 210 wounded, the Japanese managed to capture at Port Arthur sixteen forts and redoubts with all their guns, together with the dockyard with its plant and workshops complete.

THE WAZIRISTAN EXPEDITION.

The latest intelligence regarding the punitive expedition against the Waziris shows that, notwithstanding that the British force has destroyed or dismantled many fortified towers and met with relatively little opposition, the affair is not by any means at an end. The Waziris have fled, no doubt; but they will probably return before very long and again attempt to harass the troops by occasional raids and desultory attacks on positions occupied by the British force. In the meantime, what with the extreme cold and severity of the weather in the Afghan hills at this season and the difficulty of transport, all field operations are very trying to the troops concerned, and the amount of pulmonary disease among the native portion of the force especially will probably be considerable.

THE LATE CHOLERA OUTBREAK AT LUCKNOW.

We are glad to notice that the services rendered by the medical officers on the occasion of the late severe cholera outbreak in the Lucknow garrison have not only been handsomely acknowledged by Sir Robert Low, K.C.B., the general officer commanding the Oudh District, but that Sir George White, the Commander-in-Chief, has desired that his thanks may be conveyed to them, and that this may be noticed in their service sheets. His Excellency also expressed his admiration of the devotion of the wife of Colour-Sergeant Millett, 1st Battalion, East Lancashire Regiment, the corps, it will be remembered, that suffered so severely during the outbreak in question.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 8th inst., Inspector-General F. W. Davis in the chair, the sum of £99 was distributed among the several applicants.

DEATH IN THE SERVICE.

Deputy-Inspector-General David Wilson (retired) died suddenly at his residence at Devonport on the 8th inst., in his sixty-seventh year. He was Fleet-Surgeon of the *Himalaya* in South Africa during the Zulu War in 1877–79.

The *Broad Arrow* states that the Secretary of State for India has refused to sanction the extension of the services of Surgeon-Major-General Bradshaw, P.M.O. with Her Majesty's Forces, as proposed by the Government of India. He will consequently be retired in March next on attaining the age of sixty-two.

Surgeon-Major-General William Arthur Thomson, M.B., has been appointed Honorary Physician to the Queen, vice Surgeon-General J. Fraser, M.D., C.B., deceased.

Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, who has been appointed to succeed Sir Joseph Fayrer as President of the Indian Office Medical Board, is the senior of his rank, and has held several important appointments in India. He entered the Indian Medical Service in 1859.

Correspondence.

"Audi alteram partem."

"THE CARE OF THE PHTHISICAL POOR."

To the Editors of THE LANCET.

SIRS,—That the progress of preventive medicine will always remain one of the distinctive features of the Victorian era has been shown by an abler pen than mine and with a mastery of detail to which I can lay no claim. Nevertheless, the leading article which appeared under the above title in the last issue of THE LANCET calls attention to a great question which, as you truly say, urgently presses for solution. It involves no reflection on existing institutions for the treatment of phthisis to point out that, in conformity with the design of their supporters and administrators, their chief use is to minister to the wants of acute and advanced cases. The subjects of pulmonary tuberculosis in its earlier stages are mostly consigned to the out-patient departments, attendance in which involves not only loss of wages and increasing penury, but leaves them to carry on a hopeless struggle against their relentless enemy under domestic conditions which combine to ensure its ultimate victory and enable it to claim fresh victims from among their susceptible offspring. The magnitude of the evil is attested by the fact to which you draw attention—namely, "that about one person out of every seven who die succumbs to phthisis." On the other hand, the evidence that that disease need not, in all cases, lead to a fatal issue is unequivocal. The late Dr. Hughes Bennett placed on record the fact that over 20 per cent. of the necropsies he had performed on patients who had died from non-tuberculous diseases or as the result of accident revealed the cicatrices of old pulmonary vomicæ. Other pathologists have made similar and confirmatory observations. What, then, is being done to meet the requirements of such a situation? Having regard to the paucity and the nature of the hospital accommodation which is available for the abounding multitude of phthisical poor, it would not be far from the truth to say that practically nothing is done until in too many instances medical skill and hygienic surroundings can only avail to alleviate suffering and delay the inevitable issue. Provision for the treatment of the subjects of injuries and of acute disease and homes to expedite their convalescence abound. The great blot on our hospital system, the yawning gulf in our charitable and administrative organisations for the relief of disease, is that no effort has as yet been made to check in the early stages the ravages of a disease which claims a holocaust amounting to one-seventh of the total annual mortality. So glaring a defect is a reproach to an age which has witnessed the establishment and maintenance of a national system of vaccination and the devotion of public funds to such purposes as the treatment of the sick poor, the isolation of the contagious and the mentally unsound, and the disinfection of dwellings. The first step should be to provide in each sanitary district a bacteriological laboratory in which the sputa of suspected persons could be examined at the public expense on the request of the medical attendant; the

next, but more difficult because more costly, would be the erection of specially constructed buildings on carefully selected sites, to serve as temporary homes of rest and treatment for those who, in most of the existing institutions, would be treated as out-patients.

Is it too much to hope that the Victorian era will not close before something has been accomplished to meet what is, perhaps, our greatest national want?

I am, Sirs, yours faithfully,

Jan. 5th, 1895. W. BEZLY THORNE.

"CHILD MORTALITY IN ENGLAND."

To the Editors of THE LANCET.

SIRS,—Mr. Biddle, in his letter on this subject in the last issue of THE LANCET, expresses the opinion that the late Dr. William Farr would have approved the use of his "coefficients" as "the best means of setting forth the relative mortality of the several age groups." Having for more than twenty-five years enjoyed the advantage of daily official intercourse with Dr. Farr, I feel justified in asserting that he would have entirely endorsed your unfavourable criticisms on Mr. Biddle's method and conclusions. It is true that Mr. Biddle's "coefficients" correctly show the relative mortality in any age group to the mean mortality at all ages; and it is also true that the mortality in the age group 0 to 5 now bears a higher proportion to this mean mortality than it did ten or fifteen years ago. Mr. Biddle argues and assumes from this that the power of resistance to disease and death among children at this age must therefore have declined during this period. This assertion is in direct opposition to the evidence afforded by the fairly steady decline in the annual death-rate per 1000 at this age period during the last thirty years, which beyond question implies that an increasing proportion of children born in this country now attain the age of five years. I cannot refrain from expressing surprise that Mr. Biddle, in spite of his long devotion to vital statistics, should fail to see that his "coefficients" are absolutely fallacious as a test of the increase or decrease of mortality in any given age group. Child mortality is, indeed, shown by Mr. Biddle's method to have increased, whereas by the unfailing test of the rate of mortality per 1000 living we know that it has considerably declined; and he has thus been led to make the indefensible assertion that the power of resistance among children to disease and death grows less year by year. It is unnecessary to discuss Mr. Biddle's precise method of obtaining his "coefficient" which has led him to make his unfounded assertion; but, knowing that it is the quotient obtained from the group death-rate and the mean or average death-rate at all ages, it is somewhat amusing to be told that, "having the average and the coefficient, we easily obtain the group death-rate as their product;" or, in other words, that we easily come back to the point whence we started. The true rate of increase or decrease in the mortality at any age group can only be obtained from the recorded death-rates among the persons living at the same ages in a series of years, and the use of the mean death-rate at all ages in Mr. Biddle's method introduces an inevitable source of fallacy. It may be, and indeed is, a matter for serious consideration and effort that child mortality is not decreasing at the same rate as the mortality of persons above the age of five years, but this fact gives no kind of warrant for Mr. Biddle's assertion, to which you were so fully justified in taking exception. Mr. Biddle misses or ignores the main point of the argument when he asserts, with regard to the increased proportion of child mortality to the mean mortality at all ages, that it makes no difference whether this is due to the increase of mortality among children or to the decrease of mortality at ages above five years. Allow me in conclusion to refer briefly to Mr. Biddle's line of argument as to the comparative power of resistance among London children to zymotic disease. Here again his "coefficients" appear to have led him to make fully as untrustworthy conclusions. He finds that the rate of mortality from scarlet fever, diphtheria, measles, whooping-cough, and diarrhœa, at the age group 0 to 5, now bears in each case a higher proportion to the mean death-rate from the same diseases at all ages, than was the case eighteen years ago. This fact is not without interest, but it affords no tittle of evidence of any increase or decrease of the power of resistance among children to these several diseases. The decline in the death-rate from scarlet fever during this period, for instance, is one of the most remarkable facts in connexion with recent mortality statistics; and yet, because Mr. Biddle's "coefficient" for this disease shows an increase, he argues a decline in children's power of resistance to this disease. May not the fact upon which he bases this assumption be probably due to a decline in the virulence of the type of recent scarlet fever? We know that in severe epidemics of zymotic disease the deaths include a larger proportion of older children and adults than in non-epidemic periods; and yet Mr. Biddle sees in the decreased proportion of deaths from this disease above the age of five years a decreased power of resistance to the disease under that age! Again, because medical practitioners do not now so often as formerly assign diarrhœa as the cause of death of children and adults aged above five years, a decreased power of resistance to this complaint among children under this age is assumed!

I am, Sirs, yours faithfully,

Surbiton, Jan. 7th, 1895. NOEL A. HUMPHREYS.

*** We regret that we can at present give no more space to this question.—ED. L.

"THE BARIUM WATERS OF LLANGAMMARCH AND THE THERAPEUTICS OF BARIUM SALTS."

To the Editors of THE LANCET.

SIRS,—The use of the salts of barium have lately come under special notice in the columns of THE LANCET, and hence I venture to offer this small contribution to the subject. One of our most eminent physicians in Dublin, the late Dr. Alfred Hudson, fully thirty years ago taught me the value of iodide of barium in strumous glandular affections, and ever since I have used his formula with remarkably good results in suitable cases. Dr. Hudson's favourite prescription was as follows: R—Barii iodidi, gr. ii.; aquæ, ʒ ii.; misce et solve. Deni adde: Syrupi ferri iodidi, ext. sarsæ comp. fl., ää ʒi.; succi conii, ʒvi.; one teaspoonful in half a wineglassful of water thrice daily after food.

I am, Sirs, yours faithfully,

Dublin, Jan. 7th, 1895. F. R. CRUISE, M.D. Dub.

THE PLURAL OF LOCUM TENENS.

To the Editors of THE LANCET.

SIRS,—I fear that in the matter of the missing plural for locum tenens "purity of language" will ever want its avenging philologist. This technical but time-honoured use of the present participle singular as a substantive is itself a barbarous dog-Latinism, and cannot be purified by pluralisation. In default of any possible authority from philological sources I would suggest "*locum-tenents*" to serve as a practical plural for this singular solecism. This hybrid word should be spelled with an "e" in the fourth syllable instead of an "a" (as in the Anglo-French and familiar form of the word "tenant") in order to avoid confusion with other technical usages.

I am, Sirs, yours truly,

Jan. 4th, 1895. H. B. DONKIN.

AMINOL AS A GERMICIDE.

To the Editors of THE LANCET.

SIRS,—The interesting remarks and speculations of Dr. Thorne Thorne at the recent meeting at the Examination Hall, in reference to finding "in the bodies of lower animals the medium by which specific contagia may be reduced to comparative or complete impotency" receive no little elucidation and support from what we know of "the amines process of sewage treatment" and the disinfectant aminol. The active principle in both these is a gas derived from herring brine (which contains blood and débris from the pickling of herrings) when acted upon by strong lime water. This gas is a most potent germicide and antitoxin and has by no means received the attention and study which it deserves. The proportion of herring brine used in sewage treatment, three grains to the gallon, is so small that "it would seem highly probable that this process results in the production (perhaps only in a very small amount) of a substance or substances strongly inimical to bacterial life. As a matter of fact, there is no valid chemical reason to be urged against such a conclusion."[1]

[1] Brit. Med. Jour., Nov. 1st, 1890.

That this must be so is evidenced, amongst several other such cases, by the report on the experiments at Salford. For instance, Dr. Klein reports as follows: "Received on July 29th four samples, sealed 'The Amines Syndicate,' labeled—(1) Effluent, filtered, 3 P.M., July 27th, 1891; (2) Effluent, unfiltered, 1.30 P.M., July 27th, 1891; (3) River Irwell, above intake, 11 A.M., July 27th, 1891; (4) Pendleton sewage, 11 A.M., July 27th, 1891. Of each of these samples made two plate cultivations, using for each plate of No. 1 one cubic centimetre, No. 2 one cubic centimetre, No. 3 ten cubic millimetres, No. 4 one-hundred-thousandth of a cubic centimetre."

After one week's incubation the following was found:—Sample 1 (filtered effluent) contained innumerable colonies; except a dozen or so of largish white colonies all the others (uncountable) were of one kind, small, grey, liquefying; compared with Sample 2 I am of opinion that the filter has added to the effluent an uncountable number of bacteria of one and the same species. Sample 2 (unfiltered effluent) contained ten colonies, amongst them two moulds, for one whole cubic centimetre; therefore, only eight bacteria being present, it may justly be said that the effluent was practically sterile. Sample 3 contained on average 80 to 100 thousand bacteria per 1 c.c. Sample 4 contained above 10,000,000 per 1 c.c. Mr. Leo Taylor made daily bacteriological and microscopical examinations, the overflow effluent in all cases being practically sterile, whilst the sewages were teeming with countless organisms.

It would take far too much of your space to multiply examples, but it has been proved that lime alone will not do this; therefore we are driven back to the conclusion that from the refuse of lower animals (herrings) a germicide of great potency is evolved by lime. This sheds light on Dr. Thorne's remarks. Many medical men have used this compound in surgery and medicine during the last five years, and it has been found eminently useful in gonorrhœa, in diphtheria, in offensive discharges of all kinds, in dysentery as an injection, and in diarrhœa arising from animal poisons. In contra-distinction, it is inert in diarrhœa arising from unripe fruit or mechanically irritating ingesta, which goes to show that the astringent action of the lime water is not the active agent. It forms a perfectly antiseptic surgical dressing.

Fish feed upon all the impurities which drain from the land into the sea, and if there be truth in the theory that by introducing these specific contagia into the bodies of lower animals we may find developed therein an antitoxin (as they themselves are uninjured) we should naturally look for it in their bodies. That is so, and this extraordinary poison to bacteria is evolved from the nervous system and roes of herrings by the action of lime. This substance, so inimical to bacteria, is perfectly innocent to human beings, and may be drunk, even in the form of sewage effluent, with impunity, though I should not advise this latter proceeding. Two swine were inoculated by Professor Brown with swine fever; one was left alone and died, the other was fed on lime water and herring brine and survived. In the first forty-nine weeks of this year 6932 pigs died from swine fever, 54,405 were killed as diseased, and 1250 slaughtered as suspected. It is more than probable that a few pounds would have saved this costly stock. I might multiply examples indefinitely, but what I wish to arrive at is this—that the remedy be tried by subcutaneous injection, and its results compared with Behring's antitoxin. If it turns out a success numbers of lives may be saved, much irritating and unseemly disputation may be avoided, and the way cleared to a final and convincing analysis of this gas and its employment in a known chemical form. I do not myself doubt the result.

I am, Sirs, your obedient servant,
H. CAMPBELL POPE, M.D. Lond., F.R.C.S.

Goldhawk-road, W., Dec. 17th, 1894.

THE ABUSE OF PROVIDENT DISPENSARIES.

To the Editors of THE LANCET.

SIRS,—Will you please insert in your next issue the following resolution, which was recently passed at a meeting of the medical practitioners of the West Salford Parliamentary division, held at the town hall, Pendleton? We venture to think that the action taken by the medical staff of the Pendleton Provident Dispensary in severing their connexion with the dispensary will meet with your support and the approval of the profession at large. The following are some of the factors which have brought about the resignation of the medical staff. 1. This dispensary, in common with other provident dispensaries, has not fulfilled the purpose for which it was intended, the bulk of the members being well able to pay ordinary medical fees. 2. The absence of any wage limit or other standard by which the admissions can be regulated and the interests of the profession safeguarded. 3. Practically the whole management of the dispensary is in the hands of a lay committee, who only consider the financial success of the dispensary and who care nothing for the proper remuneration of the medical staff. 4. The remuneration bears no proportion to the labour and responsibility attached to the work. 5. Some of the branches of the Manchester and Salford Provident Dispensary have recently been guilty of a most objectionable form of professional advertising.

I am, Sirs, yours truly,
PHILIP GELL GARRETT,
Hon. Sec. to the meeting held on the 27th ult.

Albany-square, Pendleton, Jan. 1st, 1895.

Resolution.

Resolution carried at a meeting of medical practitioners held at Pendleton town-hall on Dec. 27th, 1894. Proposed by Dr. Fraser, seconded by Mr. Wolstenholme: "That the Manchester and Salford Provident Dispensary system, as at present conducted, is inimical to the interests of the profession, derogatory to its dignity, and unworthy of the countenance and support of medical men. That this meeting of medical practitioners residing in the West Parliamentary division of the borough of Salford desires, therefore, to record its firm conviction that the members of the staff of the Pendleton Provident Dispensary, in unanimously sending in their resignations, have consulted the best interests of the profession and deserve the thanks of all who value its present and future welfare."

POSTAL FACILITIES.

To the Editors of THE LANCET.

SIRS,—I am surprised to find how few of the public are aware of two postal facilities which the neighbours of a district post office enjoy, and for the benefit of my professional brethren I will mention them: (1) the right to hand a telegram, prepaid by stamps or coin, to any telegraph messenger who may pass, and thus save the inconvenience of despatching a servant to the office; (2) the power to post on Sunday up to 6 P.M. with an extra halfpenny stamp letters for the country, which then reach their destination on Monday morning. As I am afraid a good deal of arrears of correspondence is worked off on Sunday this is really a gain.

I am, Sirs, yours faithfully,
CAVENDISH SQUARE.

Jan. 8th, 1895.

A MISSING GUIDE.

To the Editors of THE LANCET.

SIRS,—With reference to the promised appearance of the Transactions of the International Medical Congress in April next, let us hope some sanguine expectations may be realised. What I should like to know is the probable date of issue of an exceptionally beautiful guide to Rome which was to have been issued to members at the opening of the Congress in March last. I was present during the whole of the Congress and I failed to feast my vision on that attractive production. Of all the disappointments of that memorable meeting the non-appearance of the guide-book was the greatest blow of all to

Yours faithfully,
BIBLIOPHILE.

Jan. 5th, 1895.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Magistrates and Prosecutions for Excessive Smoke Production.

ON Friday last a deputation representing the Manchester and Salford Sanitary Association and the Noxious Vapours' Abatement Association presented a memorial to the city justices at their annual meeting, suggesting that cases of prosecution for excessive smoke production should be heard by the stipendiary magistrate. It certainly seems an anomaly that the case of the accused should

be judged by one who is probably just as guilty as he is. Chemical manufacturers are frequent offenders and they are well represented on the magisterial bench. The deputation did not impute to the magistrates any unfairness or any attempt to screen each other. The position is, however, by some at least of them, felt as unpleasant, as it must be to those who are conscious that the judge and the accused might very well play Box and Cox between the bench and the dock.

Juvenile Offenders.

A second deputation waited on the magistrates from the Strangeways Refuge for Children, one of the most useful philanthropic institutions in Manchester, and submitted a resolution which had been passed by the committee suggesting that the time had come when charges against juvenile offenders other than criminal should be separately considered by the magistrates and no longer be included in the general business of the police-court. This proposition would commend itself to almost everyone, for exposure to moral contagion ought to be avoided where possible. A committee of the justices was appointed to consider the matter.

Boys' and Girls' Refuge and Home.

This institution, mentioned in the last paragraph, completed its twenty-fifth year of work last week. It owes its origin to the philanthropic zeal of Mr. Leonard K. Shaw, who is still as earnest as ever in seeking to help the poor waifs of this city. On Jan. 4th, 1870, Mr. Shaw and a few friends met to found the Boys' Refuge and Industrial Brigade, as it was then called, and from a very humble beginning a most important charitable agency has developed. The institution includes the central refuge in Strangeways, near to our Assize Courts, with workshops, six homes for little orphan boys and girls, working lads' institute, brigade boys' home, girls' training homes, seaside home at Lytham, emigration training homes, home for crippled and incurable children, open-all-night shelters, prevention of cruelty to children branches, industrial brigades, day nursery at Ancoats, a refuge depôt and book saloon, and prison gate mission. There is a branch at Belleville in Canada, and boys are sent year by year to the training ship *Indefatigable*. During 1894 750 children have been under care and training in the refuge and branch homes; 107 children have been sent out to Canada, making the total number now in the colony over 900; ten boys have been trained on board the *Indefatigable;* 1511 boys have had a week's holiday under canvas at the camp at Birkdale, near Southport; and other good deeds almost innumerable have been done. The annual meeting was attended by the Lord Mayor and by many distinguished citizens of various political and religious views; for the institution and its practical, sensible management have attracted many well-wishers.

Jan. 8th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Medical Faculty at University College.

CIRCUMSTANCES prevented the opening address of Professor Gotch being given at University College at the commencement of the session. The classes have been well attended, and the medical school of Liverpool, which has now existed for more than half a century, is in a most flourishing state. Its success is due to the untiring and self-sacrificing services of present and past lecturers, for it is only of late that any of the chairs have been endowed, and even now only a few have this advantage. Granting all the advantages of metropolitan schools, it must be admitted that Liverpool occupies a very important place in the north of England and has all the material for affording a sound medical education to any student. Moreover, the facilities for acquiring a practical knowledge of any department of medicine or surgery are now so great that at least a part of the curriculum may be spent here with profit by any student.

Jan. 8th.

A MEETING of persons interested in the Midwives Bill was held on the 9th inst. at the Midwives' Institute and Trained Nurses' Club, 12, Buckingham-street, Strand.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

THE annual report of the Edinburgh Royal Infirmary was submitted at a meeting of contributors on Monday last, Lord Provost McDonald occupying the chair. At the beginning of the year there were 663 patients in hospital, and during the year 9190 new cases had been admitted, making a total of 9853 treated during the year. Of this number 641 died in hospital. Over 4000 of the cases were medical, while there were more than 5000 surgical cases. Over 400 additional cases had been treated as compared with the preceding year. The largest number of patients in hospital at any time was 748, and the average time each patient had been in hospital was 22·6 days. Over 4000 of the cases treated were from the country. In the out-patient department 25,500 cases had received attention. The ordinary income had been £29,686, showing a diminution of £1083 compared with the preceding year, most of this being due to a falling off in the legacies and donations under £100. There is also noted a falling off in the amount of the church collections. There had been a diminution of £795 from employés at public works in the country, this being due to the prolonged strike of the workmen at collieries. The ordinary expenditure was £42,074, a decrease of £1857 on the figures of the preceding year. It is pointed out that the cost of maintenance per bed was 15*s.* 3¾*d.* less and the medical expenditure 14*s.* 1*d.* less than was the case the preceding year. The cost per annum of each occupied bed is reckoned at £58 10*s.* 4¼*d.* The extraordinary receipts for the year—i.e., of donations and legacies over £100—amounted to £22,376. As regards the convalescent home at Corstorphine, there had been 1450 admissions from the infirmary, the average daily number in the home being 79, and the average period of residence 20 days. The managers express their satisfaction at the work the infirmary is doing, but again draw attention to the need for increased accommodation, and as soon as the financial position of the country improves they propose to bring forward a scheme for its extension.

Annual Report of the University of Edinburgh.

During the past year the total number of matriculated students (including 140 women) was 2949. In the faculty of medicine there were 1494 students; of these, 622 belonged to Scotland, 493 were from England and Wales, 74 from Ireland 59 from India, 205 from British colonies, and 35 from foreign countries. The report refers to the new lectureships in medicine, but, as we stated on a former occasion, these are simply new titles for the old assistants. A new departure has been made in the admission of women to degrees in medicine, provided they have obtained their medical education in extra-academical schools specially recognised by the University, and the framers of the report expect that many will avail themselves of the privilege. It is anticipated that the McEwan University Hall will be ready for the graduation ceremonial on Aug. 1st.

Health of Edinburgh.

It is satisfactory to note that only 4 fresh cases of small-pox were reported last week. There were 212 cases of measles and 49 of scarlet fever reported. Amongst the deaths are 2 cases of small-pox. No fresh cases of small-pox are reported in Leith.

The Decrease in the Number of Glasgow Medical Students.

The statement of the numbers of matriculated students at Glasgow University for the past six years shows a net diminution during that period of 200 in the candidates for medicine. The figures for Edinburgh University show a net diminution in medical students during the same period of 531. The figures do not, in the case of either university, include students enrolled in single classes or women. Perhaps a part of the above-noted marked falling off in the number of medical students is to be ascribed to the recent copious "ploughings" in the preliminary examinations; but more probably it is simply an indication of the expected ebb in the tide of candidates which was sure to follow the rush to begin study before 1892, when the five years' curriculum became obligatory, while some of it also may be due to the extension of medical schools south of the border.

Small-pox in Glasgow.

Small-pox has reappeared in Glasgow. Four cases have

been removed to hospital, and the family has been taken to the Isolation House and revaccinated. No fresh cases have appeared so far, and the source of infection has not been traced.

Aberdeen City Hospital.

For the past fifteen months alterations have been going on at the Aberdeen City Hospital. Two of the four pavilions have been extended so as to accommodate sixteen additional patients in each, and provision has been made for lavatories, medical officers' rooms, and nurses' rooms. The apparatus for mechanical heating and ventilation is in the basement floor of the administrative block. There are underground ducts from the various pavilions, and the warm air is driven out by Blackman fans. On the ground floor of the extension of the administrative block is a spacious kitchen fitted with the best system of cooking apparatus. Above the kitchen is a suite of nurses' bedrooms. The new block of offices, 145 ft. 6 in. by 96 ft. 6 in., has a large open court in the centre, and contains laundry accommodation with all the latest fittings and machinery. The block also contains stable, coach-house, lavatory, dirty and clean clothes room, disinfected clothes room, and boiler-house. A new mortuary and a second gatekeeper's lodge have also been built. These additions have cost £16,000, and the propriety of erecting a probationary block at an additional expense of £5000 or £6000 is being considered.

The Death-rate in Aberdeen.

The deaths in the city last year numbered 2480 being at the rate per annum of 18·84 per 1000 of estimated population. Whooping-cough was prevalent from February to June, and last month an extensive epidemic of measles commenced. The number of cases of measles reported last week was 246, against 393 for the previous week.

Jan. 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Action against a "Cancer Doctor."

AT Waterford quarter sessions last week a man brought proceedings against a person described as a "cancer doctor," for having by unskilled and wrong treatment caused him to suffer great pain for several months, the defendant having promised to cure cancer in the plaintiff's hand. Some three years ago the plaintiff obtained advice from Dr. G. I. Mackesy as to the condition of his hand; cancer was diagnosed, and he was informed that to save his life the hand should be amputated at the wrist. He objected to the operation, and after some time went to Sir P. Dun's Hospital in Dublin, where Dr. Mackesy's opinion was confirmed. He returned to Waterford and placed himself under the treatment of the defendant, who was a pump-maker by trade, and who professed to cure cancer for money. The plaintiff was treated for seventeen weeks with plasters and powders, which caused great torture, and again consulted Dr. Mackesy, who found that the disease was spreading up the arm, and had to amputate above the elbow. Judge Fitzgerald, county court judge, in placing the facts before the jury, spoke strongly on the responsibility incurred by individuals undertaking to cure diseases without the necessary medical qualification, adding that they were liable, both civilly and criminally for their conduct. The jury found a verdict for the plaintiff for 17*s.* 6*d*, the money paid to defendant, the judge certifying for costs.

Death of Mr. Frederick Kirkpatrick, M.B., F.R.C.S. Irel., of Dublin

Mr. Kirkpatrick died at his residence, 9, Merrion-square, Dublin, on the 3rd inst., aged eighty-two years. Born in York-street, Dublin, in 1812, he was educated in Wexford and in the University of Dublin. He was apprenticed to Surgeon Byrne of Carlow, and afterwards to Surgeon Wilmot. He obtained the M.B. of the University of Dublin in 1837, and the Fellowship of the Royal College of Surgeons in Ireland in 1844. He was for many years visiting medical officer at the North Dublin Union Hospitals, and retired on superannuation. His contributions to medical literature included papers on Epidemic Ophthalmia and Diseases of the Bones and Joints, published in the *Dublin Journal of Medical Science*. He strongly advocated the use of potassa cum calce in diseased joints. The funeral took place on the 5th inst., and was largely attended. His remains were interred in St. George's burial-ground, Drumcondra. Among those who attended his funeral were the President, Vice-President, Secretary, Registrar, and Council of the Royal College of Surgeons in Ireland, of which he was President in 1872–73.

Health of Dublin.

During 1894 the death-rate was 2·7 below the average, and was the lowest on record. The zymotic death-rate was only 2 per 1000, and was 50 per cent. below the rate in the English towns. During the week ending the 5th inst. five deaths were recorded from small-pox, and one from beri-beri. Fifty-eight cases of small-pox were notified, as against 46 the previous week. There are now in the three small-pox hospitals in Dublin 301 cases of small-pox. A staff of fifty-eight men and women is now engaged in the conveyance of patients to hospital, in the disinfection of clothing and bedding, and in the disinfection, whitewashing, and cleansing of infected houses.

Jan. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Obesity with Thyroid Extract.

THE rapid loss of body weight attending the treatment of myxœdema with thyroid extract very naturally suggested the applicability of the same method of treatment to that *bête noire* of middle-aged men and the fair sex—obesity. Already Drs. Leichtenstern and Wendelstadt of the Augusta Hospital, Cologne, have observed a manifest diminution of *embonpoint* in twenty-two of twenty-five obese subjects after a course of treatment with fresh sheep's thyroid and thyroid tabloids. The good effects observed are ascribed to more active combustion of the accumulated fat rather than to the diuresis which is a marked feature of the initial stages of the treatment. It is said that the process is more rapid during the early part of the cure, the loss of weight diminishing gradually. The actual wasting observed varied in the different cases from 1 to 5 kilogrammes during the first week and from 1 kilo. 0 50 grm. to 9 kilo. 0 50 grm. after several weeks of the treatment. MM. Charrin and Roger[1] have succeeded in procuring notable emaciation in animals subjected to subcutaneous injections of thyroid juice (daily dose 50 centigr. to 75 centigr.). Experimentally employing the same method in Professor Bouchard's wards, M. Charrin gave an average of 1 grm. daily of thyroid juice (both subcutaneously and *par la voie stomacale*) to a woman affected with general adiposis, with more pronounced accumulation of fat at the junction of the limbs with the trunk. In three months her body weight fell from 133 kilo. to 115 kilo. The treatment was afterwards continued at intervals. During the periods of suspension of the treatment the weight remained stationary; but fell at the rate of from 50 grm. to 130 grm. a day when the extract was again administered. A maximum of emaciation appeared, however, to be reached in time. Analogous, although less marked, results were obtained in a second patient, whilst a third (all were women) case remained unaffected. A like disappointment was noted in several other instances. M. Charrin ascribes the inconstancy of results to the different natures of the obesity, to insufficiency of treatment, and in certain instances to the bad quality of the substance employed. It is only right to add that the patients experimented on were one and all free from symptoms of myxœdema.

The Antitoxin Treatment.

In my last letter I informed the readers of THE LANCET that the State had voted to the Institut Pasteur for anti-diphtheritic purposes the sum of 100,000 francs. This credit will be an annual one; only a fifth of the sum will be diverted from the purpose and allotted to the vaccination department of the Academy of Medicine. A stud of 130 or 140 horses is judged sufficient to supply the whole of France with an adequate amount of anti-diphtheritic serum, the entire cost, including preparation and postage of the tubes, being estimated at 180 000 francs (£7200) a year. Towards this the State allows a sum of 80,000 francs in order to secure the gratuitous distribution of serum to charitable institutions. The balance (100 000 francs) will, it is expected, be supplied by that section of the public who are able to buy the serum they require, and by towns and

[1] Société de Biologie, Dec. 29th, 1894.

departments, which will doubtless follow the example of the department of the Bouches-du-Rhône in providing for the maintenance of a certain number of horses (six in the case of the above-mentioned department). The keep of each horse per annum is computed at 1000 francs (£40). A town may then for this sum assure for itself a monthly provision of serum sufficing for 150 injections of 20 c.c. each, one horse supplying an average of three litres of serum *per mensem*. It is anticipated that towards the end of this month all the pharmacies, the hospitals, and official charitable institutions will be supplied with antitoxin by the Institut Pasteur. Notice is given that the most expeditious way to procure serum is for the medical attendant to telegraph to Dr. Roux at the Institute before 3.30 P.M. A tube is then posted before 4 o'clock.

The Health of Paris.

The sanitary condition of Paris is a subject that interests the whole civilised world, for who does not aspire to visit this bright city of pleasure? A honeymoon and a run over to Paris are indissolubly connected in the minds of most of the fairer portion of humanity, and other visits follow later in life. Unfortunately, the idea that this capital is a hotbed of typhoid fever, diphtheria and other horrors is ingrained in the average British mind, and not a glass of water is swallowed without misgivings as to the dire consequences that may result. Well, let my timid compatriots read the following table of the mortality and then take heart of grace:—

1880	...	55,706 deaths	...	25·37 per 1000.
1881	...	55,103 ,,	...	23,56 ,,
1882	...	56,851 ,,	...	25·33 ,,
1883	...	54,753 ,,	...	24·38 ,,
1884	...	55,059 ,,	...	24 42 ,,
1885	...	52,720 ,,	...	24·35 ,,
1886	...	55,110 ,,	...	24·33 ,,
1887	...	52,836 ,,	...	22·00 ,,
1888	...	51 230 ,,	...	22 00 ,,
1889	...	54,083 ,,	...	22 93 ,,
1890	...	54,566 ,,	...	22·80 ,,
1891	...	52,262 ,,	...	21·65 ,,
1892	...	54,536 ,,	...	22 47 ,,
1893	...	52,947 ,,	...	21 80 ,,
1894	...	48,145 ,,	...	a mortality of probably less than 20 per 1000.

Thus, there have been nearly 5000 fewer deaths during 1894 than during 1893. Calculating one death in ten cases treated, this means 50,000 patients less than in 1893. In the week ending Dec. 29th, 1894, there were registered 875 deaths, instead of 938 the preceding week, and 1020 the average for that month. There were only 5 deaths from typhoid fever (average 10), 5 from whooping-cough, 2 from scarlet fever (2 is the average), none from small-pox (average 4) or measles (average 9), and last, but not the least important, 5 from diphtheria, instead of 30, the average for December.

Thesis Writing at the Faculty of Medicine.

The number of theses for the M.D. degree "presented and sustained" before the Paris Faculty from Dec. 18th, 1798, to July 31st, 1894, reaches a grand total of 28,793. This gives an average of only 300 M.D.'s a year. Nowadays this average is more than doubled.

Jan. 8th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

A Sydney Professor's Salary.

IN reply to questions recently asked in the Legislative Assembly of New South Wales, the Colonial Secretary stated that the total yearly salary received by Dr. T. P. Anderson Stuart amounted to £1777 9*s.* 6*d.*, made up as follows: annual salary as President of the Board of Health, £489; as Professor of Physiology at the Sydney University, £900; lecture fees from students, £377 15*s.* 6*d.*; and examination fees, £10 10*s.* He received no salary as Medical Adviser to the Government. It was further stated that it was not true that owing to Dr. Stuart's connexion with the Government service a great portion of the work which previously attached to his position at the University has now to be performed by other persons; but it was true that Dr. Manning resigned the position of Medical Adviser because he could not for want of time faithfully perform the duties attached to that office and to the position of Inspector-General of Insane as well, and that in consequence of such resignation Dr. Manning suffered a considerable loss of salary. In reply to a question as to the propriety of members of the Civil Service holding dual offices of this kind, it was stated that the subject was one requiring serious consideration, and would probably be dealt with after a full inquiry into the general state of the service.

Prevalence of Typhoid Fever and Diphtheria in New South Wales.

Notification of infectious diseases is not compulsory in New South Wales, nor have the health authorities any power to enforce isolation of such cases. The Board of Health only learns in a haphazard way, through the police, or by persons applying for medical aid, and through returns voluntarily furnished by the hospitals, that there are cases of infectious disease in certain districts, and then can only use moral suasion to induce patients to go into the hospitals, attached to which are properly equipped isolation wards. In many cases, however, when hospital accommodation is offered it is declined, and patients are treated in their own homes with no proper surveillance. There are indications that typhoid fever is likely to be prevalent and severe during the coming summer. In twenty-four hours four deaths from this disease occurred at Wyalong, fifteen cases were reported in the Pitt Town division of Wallsend, a great number have occurred at Greta and at Hinton, and the disease has also broken out at Milparinka. Diphtheria also seems to be prevalent in the country. The Government medical officer at Parkes has drawn the attention of the health authorities to the occurrence of the disease in that town, and it is also rife at Deniliquin and at Gulgong.

Medical Notes in Central Australia.

Dr. E. C. Stirling of Adelaide recently accompanied an exploring expedition to Central Australia, and has furnished to the *Intercolonial Quarterly Journal of Medicine and Surgery* some notes on matters of medical interest. Concerning the disease known as "barcos rot," a condition in which the slightest scratches or abrasions of the skin pass speedily into rapidly spreading, freely suppurating, yet superficial and painless ulcers, he says that it is probably due to several causes—infection by flies, the absence of fresh fruit and vegetables, and often of fresh meat, the sudden alternations of temperature, from 20° F. at night to 85° in the day during the winter, while the sores are continually subject to fresh irritation. The disease is popularly ascribed to scratches from the mulga wood (Acacia aneura), but, he thinks, without any reason. The best treatment is protection of the sores from irritation and the application of unguentum acidi borici. Dr. Stirling noticed that a large number of the aboriginals, male and female, young and adult, presented a peculiar conformation of the tibiæ, which were curved anteriorly and were laterally flattened. He did not discover any associated pathological conditions, and is unable to determine whether the abnormality is to be regarded as a racial characteristic or a pathological condition. Circumcision and subincision were performed by all the natives met with, and he could find no support for the view that subincision, or splitting the urethra from the meatus to the scrotum, is done to prevent procreation, and heard of well-authenticated instances of three, four, or even five children in a family who were the offspring of subincised males. Little information could be obtained regarding therapeutic agents employed by the natives. Inunction with grease and red ochre is used in nearly every complaint. In some extreme cases freshly drawn blood is administered internally, and recently passed urine is used as an antidote to strychnine. Dr. Stirling saw several dogs and one woman who had recovered after having swallowed doses of strychnine that usually prove fatal. Probably the remedy acts as an emetic.

Beri-beri in New South Wales.

Dr. R. T. Paton, Government Medical Officer, Sydney, contributes to the *Australasian Medical Gazette* of November a paper with the above title. He mentions several cases of peripheral neuritis in Chinamen which he regards as true beri-beri. One case proved fatal from implication of the cardiac and respiratory branches of the vagus, and a post-mortem examination was obtained. The heart was large and pale, but not fatty, and the limbs, though apparently œdematous, contained no serous effusion. The patient was

one of six living in a cabinet-maker's shop, all affected with the disease. When he was removed to hospital he improved, but he returned to the infected building and again suffered from the disease.

Actinomycosis Hominis.

A case of actinomycosis of the thigh of a male aged thirty-five is reported by Dr. Marten of Adelaide. It caused an ill-defined swelling near the great trochanter, and was associated with weakness, fever, night sweats, and insomnia. The swelling was incised, and "gave exit to bloody fluid in which were hundreds of small, rounded, greyish, yellow-looking bodies, rather smaller than mustard seeds." These were examined and proved to be the ray fungus. Nodules continued to discharge from the wound and swelling occurred lower down. An incision was then made almost the whole length of the thigh, and various sinuses scraped out with Barker's scoop douche and irrigated with iodine solution. A portion of the vastus externus muscle, which was thickly studded with nodules, was excised.

A Case of Enlargement of the Liver and Jaundice, associated with the Passage of Hydatid Cysts by the Bowel.

At the last meeting of the Medical Society of Victoria Mr. J. P. Ryan read notes of a patient attacked with Jaundice, and presenting marked Enlargement of the Liver. After free purging a number of hydatid cysts were passed in the stools, and the jaundice and other symptoms disappeared. Five months afterwards he again became ill with jaundice, emaciation, and fever. The abdomen was opened and the liver examined with the hand, but no cyst discovered. The liver was freely explored with a long trocar, but neither hydatid fluid nor pus was withdrawn. The patient gradually developed chronic septicæmia, and died six weeks after the operation. At the necropsy the liver was found riddled with small abscesses, but no hydatids were found in any of the organs.

Melbourne Hospital Sunday Fund.

The annual meeting of the Hospital Sunday and Saturday Fund was held on Sept. 6th last. The report of the committee stated that the total amount received was £5794 16*s.* 7*d.*, which is less by £1444 17*s.* 4*d.* than the preceding year. It was resolved that the medical charities to be assisted from the fund be the Melbourne Hospital, Alfred Hospital, St. Vincent's Hospital, Women's Hospital, Hospital for Sick Children, Eye and Ear Hospital, Homœopathic Hospital, Austin Hospital for Incurables, Benevolent Asylum, Immigrants' Aid Society, Collingwood Free Dispensary, Richmond Free Dispensary, Convalescent Home for Women, Convalescent Home for Men, Consumptive Sanatorium, and the Melbourne District Nursing Society.

The Bay View Asylum, Sydney.

In consequence of the charges made against the management of the Bay View Asylum, Sydney (to which reference has been made in a former communication), a Royal Commission has been appointed to make investigation, and has commenced taking evidence. The Commission has refused to allow Dr. Vause, the proprietor of the asylum, to be represented by counsel; but he will have the opportunity of questioning witnesses.

Hospital Appointments.

Dr. G. E. Rennie of College-street, Sydney, has been appointed Honorary Assistant Physician, and Mr. J. F. McAllister of Stanmore, Honorary Assistant Surgeon to the Prince Alfred Hospital, Sydney. Dr. E. H. Snibley has been appointed Honorary Anæsthetist to the Melbourne Hospital.

LITERARY INTELLIGENCE.—The publication of Mr. Hutchinson's "Archives of Surgery," which has lapsed for six months, is now being resumed. No. 21 will appear in a few days, with additional letterpress as well as nine plates; and this number, which commences Volume VI., contains a Chronology of Medicine from the Fifteenth to the Nineteenth Century. The publishers will in future be Messrs. West, Newman, and Co., 54, Hatton-garden.—The immediate appearance is announced of a French translation of the excellent work by Professor Zuckerkandl, Professor of Anatomy in the University of Vienna, on the Nose and Nasal Fossæ. The translation has been made by Dr. Lichtwitz of Vienna and Dr. P. Garnault of Paris from the second edition of Professor Zuckerkandl's work, and will be published by M. G. Masson, 120, Boulevard St. Germain, Paris, at the price of 40f.

Obituary.

EDMUND CHARLES JOHNSON, F.R.C.S. ENG., J.P., D.L.

WE regret to announce the death of Mr. Edmund Charles Johnson, which took place on the 3rd inst. at his residence in Eaton-place. The deceased gentleman, who long ago relinquished the practice of his profession, held an almost unique position in connexion with the furtherance of schemes for improving the condition of the blind and the deaf and dumb. He studied medicine at St. George's Hospital, to which his brother, Henry Charles Johnson, was for many years surgeon. After an exceptionally successful student career he qualified as M.R.C.S. in 1843, and then settled in Arlington-street, intending to follow obstetric practice. He had already as a student attracted the attention of Dr. Robert Lee, the celebrated obstetric physician of St. George's Hospital, to whom he was warmly attached, and who publicly acknowledged the value of the services rendered by him in the reporting of lectures and in the cataloguing of the pathological preparations which are now at Cambridge. He had not long been qualified to practise when, at the age of twenty-two, he went to Italy to attend on Viscount Cranborne, who suffered from the misfortune of blindness. In company with this nobleman, who was the eldest brother of the present Marquis of Salisbury, he visited the principal blind schools of Europe, and travelled extensively in Russia before the introduction of railways. On returning to England he definitely retired from practice, and until Lord Cranborne's death he devoted himself entirely to the care of his distinguished patron and friend. Owing to Lord Cranborne's affliction Mr. Johnson was led to take an active interest in all questions affecting the welfare of persons suffering from blindness, and his position with respect to that influential family greatly facilitated the prosecution of his object.

In 1850 the degree of "M.D. Lambeth" was conferred on him by the Archbishop of Canterbury, an honorary (if somewhat anomalous) distinction which does not entitle the graduate to practise medicine, and in 1858 he became a Fellow of the Royal College of Surgeons of England. The governors of the School for the Indigent Blind, Southwark, made him their vice-president and chairman, and in 1885 Her Majesty the Queen appointed him a member of the Royal Commission on the Blind and Deaf and Dumb, in which capacity he visited many of the Continental institutions for the blind. He also wrote a report on the Apparatus and Methods used in the Instruction of the Blind, which was presented to both Houses of Parliament. He was on the managing body of several institutions and associations for promoting the welfare of the blind, as well as the vice-president of the Congress for the Blind held in Paris in 1878. The French Government created him Officier d'Académie Française in 1882. He was the writer of numerous memoirs and official reports connected with his special subject, and a member of various learned societies in France, Italy, and Switzerland. He was made Deputy-Lieutenant for the Tower Hamlets in 1858 and J.P. for Middlesex and London in 1865. He attended actively to the discharge of his duties as a magistrate, and in his public capacity as well as in private life he invariably showed himself to be an intelligent and benevolent gentleman.

ARTHUR SUTHERLAND, M.B., C.M. GLASG.

MUCH regret has been occasioned in Ross-shire by the announcement of the death of Dr. Sutherland of Invergordon in that county. Although he was only in his fifty-second year his health had for a considerable time been seriously impaired; pneumonia ultimately developed, and his sufferings were brought to a close in the last week of 1894. His early studies were arranged on the expectation that he would follow the scholastic profession, as he, in fact, did for a time, but before long his thoughts became fixed on a medical career. Having completed the educational course at Glasgow University, he graduated as M.B., C.M., in 1869, and ultimately settled in practice in Invergordon, his native place. His selection of the medical profession was probably influenced by his fondness for biological science, especially botany and the natural history of marine animals and plants.

These pursuits, together with archæology, were the welcome occupation of his leisure hours, and provided him with subjects for interesting contributions to periodical literature. In addition to his literary and scientific attainments he possessed considerable artistic talent, being a skilful painter and the writer of many poetical pieces which well deserve publication in a collected form. His death is deeply lamented by the numerous friends to whom he was endeared by his genial manner and estimable character.

THE INDIAN MEDICAL CONGRESS.

THE Congress came to a conclusion on Dec. 29th, 1894.

The most practical outcome of its work that has as yet occurred is the answer given to a deputation to the Member of the Indian Council in charge of the Home Department (Sir Anthony Patrick MacDonnell, K.C.S.I.), urging that Government should give practical assistance to scientific research and sanitary development. Sir A. P. MacDonnell consented to advise the Government to accede to the request of the representatives of the Medical Congress.

Calcutta at this season of the year enjoys one of the finest climates in the world, and we make no doubt that, proverbial as that city is for its hospitality and festivities, the members attending the Calcutta Medical Congress have had a most enjoyable time. The gathering from all parts of India has been large, and we may be sure that those representatives of medical science from this kingdom, our colonies, and from the continent of Europe, who have seized the occasion of this Congress as an opportunity for turning their backs for a time on Western civilisation and their faces to that of the East, have been made thoroughly welcome.

THE SECTIONS.

MEDICINE.

The Natural Conditions affecting Cholera Spread in India.

Surgeon-Captain H. HERBERT, F.R.C.S., read a paper on Some of the Natural Conditions affecting Cholera Spread in India. In this paper he said: "I wish to touch on one or two points in the meteorology of cholera which I have imperfectly dealt with elsewhere.

"*Endemic areas.*—I have already published reasons for believing that cholera is very generally endemic in some degree throughout the greater part of India. Allowances must be made for imperfections in the registers both of the weather variations and of cholera intensity. This being granted, a relation between meteorology and the disease, such as I have shown for the Bombay Province, may almost be held to prove general endemicity throughout the province. The proportion between meteorological influence and cholera mortality is very fairly exact, and after complete epidemic subsidence the disease inevitably reappears as soon as the natural conditions become favourable, and in the history of its spread the influence of contagion is very lightly felt. In dealing with provinces as units I have classed the Punjab as non-endemic. This is not absolutely correct, for the disease is undoubtedly very mildly endemic in the eastern districts of the province; but all the severe visitations have been due to imported infection spreading from Hurdwar fairs. With limited time and material at my disposal I am sorry to say I have been able to make nothing of the natural conditions influencing cholera spread through the Gangetic plains; but the constant presence of the disease in some degree throughout the year, and the comparatively slight variation in annual cholera mortality, indicate that the disease is at least as endemic there as in the Bombay Province. It is inevitable that cholera infection must be exported from Lower Bengal more freely through the less endemic Gangetic plains than the perhaps feebler virus can be imported thence into Lower Bengal; but the bulk and extent of this travelling westward from the delta of the Ganges have been exaggerated, largely through the influence of Bryden's teaching. There must always be the *appearance* of movement westward in the cholera epidemics of Northern India. For the chief cholera season comes early, in the hot weather, in waterlogged Lower Bengal. It is delayed as one goes westward with the diminishing annual rainfall, until in the Punjab ordinary epidemics come 'during and towards the end of the rains.' The monsoon, itself advancing from the east, blotting out the disease over the lower country and bringing the necessary rain for prevalence in the more western tracts, adds slightly to the appearance of travel in epidemics. And there is still another factor, which I have alluded to in treating of cholera in Berar. Suppose there are two consecutive years favourable to cholera prevalence throughout Northern India. In the first year the mortality in the lower Gangetic plains will be much heavier than in the Punjab. In the following year these eastern districts will feel to some extent the effect of exhaustion of material, of susceptible persons, and the mortality will hence be less; but in the west this will not be felt to any appreciable degree, and the fatality will be unchecked. Thus there will result a false appearance of motion in the two cholera epidemics. The so-called epidemic influence will seem to have concentrated itself more to the westward in the second year. In a recent number of THE LANCET there is a reference to two types of cholera outbreak; the one attaining its maximum at once, the other rising gradually. Is not the former typical of an importation from without, under conditions unsuited to the continued development of the organism; and the latter characteristic of multiplication of the indigenous organism under increasingly favourable natural conditions?

"*Rainfall.*—It is now, I suppose, generally accepted that large epidemics of cholera are mainly water-borne, infected individuals, infected clothing, and the like serving chiefly as links of connexion between the various water-supplies. It is even probable that wherever the disease is endemic the organism has a permanent existence in some of the people's water-supplies. Unless this be so, it is difficult to see how a water-borne epidemic can make its appearance in a place during the dry season, after perhaps a long interval of complete absence, without importation. Constantly repeated observation of instances of this led to the old belief in India that the disease must be air-borne, and not due to infection in any way. Thus it may almost be assumed that the weather elements influence cholera prevalence mainly through their effect on the water-supplies. I believe that meteorological influence on cholera is threefold. As might be expected, rainfall comes first in importance, temperature perhaps next, and atmospheric pressure last. The evidence[1] regarding rainfall and its effect on cholera which was brought forward in a paper submitted to the International Congress of Hygiene and Demography at Budapest pointed roughly in the following directions. The provinces of continuously high ground water level have cholera all the year round. Here the rains flood the tanks and wells, and lower the cholera-rate apparently by diluting the specific poison in them; and the heaviest cholera mortality is attained when the tanks are at their lowest. On the other hand, in the provinces of scanty rainfall and low water level it is found that the conditions most favourable to cholera spread are departed from in the other direction. Cholera comes in the rainy season and disappears in the dry seasons. A very low ground water level completely abolishes cholera prevalence. It appears likely that the observation of the Sanitary Commissioner to the Government of India on the cholera at Bellary in the drought of 1877 will be found to apply to other parts of India and at all times. It was noticed that the point at which the want of rain began to lower the cholera-rate was when the tanks and streams began to dry up, driving the people to the use of well water, then at a considerable depth. From all this it would appear that the most dangerous water to use in cholera times is tank or other surface water when the water has run very low. Why should water deep below the surface be unsuited to cholera development? The water is probably purer; but the comma bacillus is said to live longer in pure than in foul water, and deep wells in India are but little less liable to specific contamination than shallow wells are. For there can be little doubt that Indian wells become contaminated by cholera discharges, not so much by soakage through the soil baked hard by the sun in the

[1] The evidence related only to very broad tracts of country. The test of local experience is now required.

dry seasons, but rather directly by the washing of infected clothing on their margins and by the introduction of contaminated vessels into their waters. One obvious explanation of the unsuitability of deep well water for cholera growth is, as I have said elsewhere, to be found in its lower temperature, its removal from the influence of the sun's rays. On the other hand, one cannot help thinking that there is something more than this, and that the habits of the people in connexion with tank and river water have something to do with the development of the cholera organism in it. As already stated, it is not when the tanks are filled and overflowing that they are dangerous, but when their water runs low; when the number of people using them is greatest in proportion to the quantity of water available; when they become foul, not from the introduction of sewage, but from the bathing of men and animals, the washing of clothing, and as a result the constant stirring up of the mud from the bottom. That the number of persons using a water-supply in this way, both as a bathing ground and for drinking purposes, has something to do with the risk of cholera spread from it is borne out by the history of Hurdwar fair epidemics.

"*Hurdwar fair epidemics.*—Experience has shown that the element of greatest danger at these gatherings is the increase in numbers at Kumbh fairs. Two of the last three Kumbh fair of 1891 was proclaimed as a triumph of sanitary skill, and due to the very exceptional sanitary arrangements in force. But it is not at all certain that an epidemic would have broken out had there been no special precautions taken. There was no outbreak at the Kumbh fair of 1855, and the assembly in 1891 was scarcely larger than at the Adh Kumbh fair of 1885, when there was no cholera, though no extraordinary precautions seem to have been taken. In both of these years 1885 and 1891 the water in the river was probably above the average (see appended table). On the other hand, at the Kumbh fairs of 1867 and 1879, when cholera did break out, the river was probably lower than the average; in 1879 probably well below it. In 1867 the crowd of pilgrims was so great that it would probably have counterbalanced a moderate excess of water in the river. There was one other feature in the weather of 1892 which may have helped in the spread of cholera. The hot weather was one of the earliest and most intense on record. But there have been other very hot years and no cholera. (1880 was the next hottest year. See column three in the table for reason why there was no cholera.) The practical inference to be drawn from all this is that the one sanitary need at these fairs for the prevention of general cholera outbreak is the adoption of measures to secure a rapid and free current of water past the

Table to show the Relation between Hurdwar Fair Epidemics and the State of the River Ganges as it may be judged from the Government of India Weather Reports.

Year.	Attendance of pilgrims at the fairs.	Records of Himalayan snowfall and of cold weather rainfall on the Northern plains.	Result.
1867	Kumbh Fair, 1,250,000 pilgrims.	"In the cold weather (six months) 1866–67 the rainfall of the Punjab was only 44 per cent. of the average, and of the North-West Provinces 67 per cent. of the average" ("Bellew's History of Cholera," pp. 416 and 505).	Very severe epidemic. Registered Punjab cholera mortality 43,146. "Probably greatly underestimated" (Sanitary Report for 1892, p. 141).
		No record of snowfall.	
1879	Kumbh Fair, 500,000 pilgrims.	"The first striking peculiarity, at the beginning of the year, was the dryness of the atmosphere of Upper India, and the absence of the usual winter rains" (Sanitary Report for 1879, p. 156). "It was probably in consequence of the prevailing absence of rain, not only in January, but also in the two preceding months of 1878, that the temperature of Upper India was excessive and especially at Leh and the other Himalayan hill stations" (Meteorological Report for 1879, p. 160).	Epidemic. Registered Punjab cholera mortality, 26,136.
1880	Ordinary year.	The Commissioner of Kumaon reported with respect to the hills around the Upper Ganges Valley:—"The winter has been an exceedingly severe one. Snow fell at ..... places where it was seldom seen" (Meteorological Report for 1880, p. 166).	Nil.
1885	Adh Kumbh Fair, 262,621 pilgrims.	"The rainfall of the year has furnished a very striking corroborative instance of heavy winter and late spring snowfall on the North-Western and Western mountain tract being followed by ....." (Meteorological Report for 1885, p. 195).	Nil.
1891	Kumbh Fair, 269,345 pilgrims.	"The cold weather was characterised ..... by excessive snowfall in the Himalayas" ("Weather Review" for 1891, p. 476). "The cold weather rainfall the heaviest on record in many parts of upper India" ("Weather Review" for 1892 p. 529).	Nil.
1892	Ordinary year, 700,000 pilgrims.	"The cold weather was exceptionally dry. The snowfall on the hills was one of the lightest on record" ("Weather Review" for 1892, p. 529).	Severe epidemic. Registered Punjab cholera mortality, 75,959.

epidemics have fallen on Kumbh fairs; and as regards the origin of the third of these epidemics the explanation of the Sanitary Commissioner to the Punjab is of interest here. Comparatively few pilgrims had assembled; but it was one of the hottest and driest years on record in Northern India. The Sanitary Commissioner states:[2] 'In the submontane tracts many of the streams were dried up. ..... The sanitary arrangements at the fair were those which proved so successful in 1891; it was impossible, however, to keep the water in the bathing pool so fresh as on the former occasion on account of the smaller volume of water in the river and the direct obstruction to its flow in the sacred pool by recently formed obstacles and foreshores.' Thus each of the three epidemics was characterised by one feature—excess in the proportion of bathers to the quantity of water available, due in two instances mainly to increase in the number of pilgrims, and in the third to one of the driest seasons on record. And it may be shown as probable that they had no other effective condition in common, and that the fairs of other years did not possess this characteristic. I have no record of the condition of the river in different years but it may be judged very fairly from the records of Himalayan snowfall and of the cold weather rainfall on the northern plains. The exemption from cholera attack of the bathing *ghât* in dry years. There is not time to inquire whether a cholera outbreak here be due to relatively large specific pollution of the water or to the condition of the water rendering it a good culture medium. For several reasons I believe the latter to be correct.

"*Atmospheric temperature and pressure*.—Only a few words can be added under these heads. These two meteorological elements are, in a sense, antagonistic in their influence on cholera. Both high temperature and high barometric pressure are favourable to cholera prevalence. But a high temperature lowers the barometric pressure, consequently the pressure influence is not seen in the regular seasonal cholera changes, and even the effects of the variations from normal of atmospheric pressure are only well seen in parts of India where the temperature anomalies are small. The effect of temperature on the cholera organism is best judged in places where the water-supply is from wells. In tanks the result is complicated by the effect of shrinkage in volume of the water. As regards atmospheric pressure, it is interesting to notice[3] that Hardie, in Queensland, has found the same relation between pressure and typhoid fever as I have in Bombay between pressure and cholera. He states 'that, although the period of highest barometric pressure—winter—

[2] Government of India Sanitary Report for 1892.

[3] Hardie's Atmospheric Pathology of Queensland, p. 101.

corresponds fairly with the period of lowest mortality, the higher the barometer during any season of the year the greater will be the death-rate.'"

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the examiners on Monday, Jan. 7th, 1895:—

Anatomy and Physiology.—Henri Oscar Pomme de Mirimonde, Yorkshire College, Leeds; Nicholas Joseph Kendal, Wilfrid Anthony Legh Jackson, and John Charles Young, Mason College, Birmingham; Frederick Thomas Butler, Robert Hughes, Harry Melville Rees, William Harle Stott, and Fred Schofield Rhodes, Owens College, Manchester; Ernest Symes, and George William Bertram Beverly, University College, Bristol; David Richard Edwards, Charles J. Linton Palmer, and William Daley, University College, Liverpool; Richard Rothwell Horley, Middlesex Hospital; and James Templeton, St. Mary's Hospital.

Anatomy only.—Langford Newman Lloyd, Charing-cross Hospital; Hubert Richard Rice, Mason College, Birmingham, and London Hospital; Charles Durban Ingle, University College, Bristol; Thomas Preston Yates, Owens College, Manchester; and Sidney Herbert Longhurst, Guy's Hospital.

Physiology only.—Arthur Cubley, Firth College, Sheffield, and Mr. Cooke's School of Anatomy and Physiology; Frederick Charles Torbitt, Owens College, Manchester; Alexander Evans, St. Mungo's College, Glasgow; George Henry Heron, University College, Liverpool; Jeffrey Gott, King's College, London; John Benjamin Augustus Treusch, Guy's Hospital; and Maurice Clare Bielefeld Anderson, St. Mary's Hospital.

Thirteen gentlemen were referred in both subjects, and five in anatomy only.

Tuesday, Jan. 8th:—

Anatomy and Physiology.—William Quinton Brown, William Richard Flint, and Charles Hilton Furnivall, St. Mary's Hospital; Edward Halford Ross, Ernest Lionel Forward, William Somerset Maugham, and Herbert S. Edgcumbe Williams, St. Thomas's Hospital; Richard Galway Murray, St. George's Hospital; Josiah Oldfield, George Arthur Whitworth Spear, and Harold John Hutchens, St. Bartholomew's Hospital; Thomas Alexander Dowse, Charing-cross Hospital; George Quintin Richardson, Adelaide Hospital and Royal University, Dublin; Arthur Ernest Gilmore and Stanley Edward Denyer, Cambridge University; Francis John Nicholls and Robert Balderston, Guy's Hospital.

Passed in Anatomy only.—Donald Ackland and John Herbert Crangle Fegan, Charing-cross Hospital; Frank Voller, St. Thomas's Hospital; Robert Douglas Dobie, King's College, London; and Thomas Hill Bailey, King's College, London, and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.—Sydney Herbert Mason and Cyril Cecil Poole, Guy's Hospital; George Fernandez Mitchell Clarke, Charing-cross Hospital; Charles Nugent Chadborn, St. George's Hospital; and Emilo Frederico Crabtree, St. Bartholomew's Hospital.

Eleven gentlemen were referred in both subjects, five in anatomy, and five in physiology.

Wednesday, Jan. 9th:—

Passed in Anatomy and Physiology.—Henry Arthur Clifton Harris and Arthur Charles Haslam, St. Thomas's Hospital; Gordon O'Neill, Charing-cross Hospital; Basil Fenton Wingate, St. Mary's Hospital; John Rosil Walters, James George Watt, and Charles Clifford Worts, Guy's Hospital; Frank Brickwell, William Beckton, and Ernest George Klumpp, St. Bartholomew's Hospital; Alfred Sigismund Bruzaud and Herbert James Bryan, London Hospital; and Hewlett Bceton, St. George's Hospital.

Passed in Anatomy only.—Austin Romuald O'Fflahertie, Queen's College, Cork, and London Hospital; Charles Arthur Craven Salmon, Guy's Hospital; Francis Augustus Pitts-Tucker, St. Thomas's Hospital; and Colville Smith Agnew, Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.—Robert Lendon Argles, St. Mary's Hospital; Alfred John Andrew, St. Bartholomew's Hospital; and Arthur Ernest Malaher, St. Thomas's Hospital.

Sixteen gentlemen were referred in both subjects, six in Anatomy only, and four in Physiology only.

SOCIETY OF APOTHECARIES OF LONDON.—At the recent Primary Examination (Part II.) the following candidates passed in the subjects indicated:—

Anatomy and Physiology.—C. S. Agnew, Charing-cross Hospital; W. Amsden, St. Bartholomew's Hospital; E. Brice, Birmingham; E. F. Crabtree, St. Bartholomew's Hospital; E. F. Dowding, St. Thomas's Hospital; W. H. Gale, St. Thomas's Hospital; A. H. Gibbon, St. Thomas's Hospital; A. T. Griffiths, Birmingham; H. W. Hues, Birmingham; T. J. Hughes, Middlesex Hospital; W. J. Lindsay, Guy's Hospital; M. Paine, Women's Medical College; C. C. Poole, Guy's Hospital; E. W. W. Pughe, Birmingham; C. B. Salway, St. Thomas's Hospital; H. E. Scowcroft, Cambridge; E. Whalley, Leeds; A. M. St. J. Wright, Madras; L. Wright, St. Thomas's Hospital.

Anatomy.—T. H. Bailey, King's College Hospital; P. Cator, St. Bartholomew's Hospital; C. F. W. Dunn, Cambridge; A. H. Fitzgibbon, St. Bartholomew's Hospital; C. F. Eddowes, St. George's Hospital; J. G. Gowlland, St. George's Hospital; M. B. Hebron, King's College Hospital; H. M. Maitland, Women's Medical College; S. J. Meredith, Birmingham; A. Ross, Guy's Hospital; J. Scarr, Manchester; and A. M. Williams, Women's Medical College.

Physiology.—G. F. M. Clarke, Charing-cross Hospital; J. Freeman, University College, Bristol; J. R. Jeaffreson, St. Bartholomew's Hospital; F. T. Knott, Guy's Hospital; H. M. Waller, St. Bartholomew's Hospital.

The following candidates passed at the recent Primary Examination (Part I.) in the subjects indicated:—

Chemistry, Materia Medica, Botany, and Pharmacy.—H. M. Hardy, South London School of Pharmacy.

Chemistry, Materia Medica, and Pharmacy.—L. Bradstock, Birmingham; C. H. F. Dalton, Charing-cross Hospital; and A. G. Lang, Guy's Hospital.

Materia Medica and Pharmacy.—C. F. Eddowes, St. George's Hospital; and A. C. McLean, King's College.

Materia Medica.—W. O. Piper, Westminster Hospital.

Biology.—S. K. K. Haslam and E. C. Scarlett, Women's Medical College.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Otto Heubner has been promoted to the rank of Ordinary Professor of Children's Diseases.—*Gratz:* Drs. von Steinbuchel and Rossa have been recognised as *privat-docenten* in Midwifery and Gynæcology.—*Lyons:* Dr. Nové Josserand has been appointed by competition Surgeon to the Hospitals.—*Marburg:* Dr. Finkler of Bonn has declined the chair of Hygiene.—*Odessa:* Dr. Medvêdeff of St. Petersburg has been appointed to the chair of Zoology and Comparative Anatomy and Physiology.

LONDON POST-GRADUATE COURSE.—The Vacation Courses in Pathology and Hygiene will commence on Monday, Jan. 21st, and be given daily until Friday, Feb. 1st. This will enable practitioners who can spare twelve days to study those subjects to compress a large amount of useful work into a small space of time. The syllabus can be obtained from Dr. Fletcher Little, 32, Harley-street, W.

FOOTBALL CASUALTIES.—On the 25th ult., at Maidstone, in a game between the Maidstone Invicta and Maidstone Reserves, an Invicta player, a youth aged sixteen years, "fractured his knee," and subsequently received medical treatment at the hospital, but blood poisoning supervened and he died on the 7th inst.—In a recent match at Warmley a player sustained a dislocation of his left jaw and also injury to one eye and the left side of his face.

ADDENBROOKE'S HOSPITAL: MUNIFICENT DONATION FROM MR. PECKOVER.—A quarterly court of the governors and subscribers of Addenbrooke's Hospital, Cambridge, was held at the hospital on Dec. 31st, under the presidency of the lord-lieutenant of the county (Mr. A. Peckover). The Finance Committee reported that the excess of expenditure over income amounted to £650. The deficiency was met in the happiest and handsomest manner by the chairman, who announced his intention of giving the hospital £1000.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 2nd, Dr. Tew, President, being in the chair. Dr. Bell Taylor showed ten patients, aged from forty-four to seventy-eight years, upon whom he had operated for Cataract, in most cases on both eyes. All had central and movable pupils and showed hardly any trace of the operation. Dr. Taylor also read a paper on the Accidents which are apt to occur during and after the Operation of Cataract Extraction. He described the earlier methods of operating, and pointed out the frequency of accidents resulting from them. The various methods adopted by Beer, Waldau, and von Graefe were mentioned. He preferred, he said, to use a modified Graefe's knife with a narrow blade of his own design, and for many years past had been accustomed to operate without iridectomy. A cataractous lens was sometimes larger than normal, and this condition greatly increased the difficulties of the operation. Escape of vitreous might take place when that medium was abnormally fluid or when the tension of the globe was increased. As a result there might be detachment of the retina or choroid or extreme collapse of the eyeball. In the case of excessive tension a preliminary iridectomy should be done. Prolapse of the iris into the wound should be treated by massage over the closed lids; if the pupil remained much displaced it might be necessary to do an iridectomy downwards. Inflammation and even suppuration of the globe might occur sometimes, but these accidents were not necessarily more frequent in the aged. On the appearance of inflammation leeching, cold, or astringents should be used.—Remarks were made by the President and Dr. Cattle and Mr. Laws.

ROYAL INSTITUTION.—On Tuesday next, Jan. 15th, Professor Charles Stewart, M.R.C.S., will deliver the first of a course of twelve lectures at the Royal Institution on the Internal Framework of Plants and Animals.

THE Italian journals, our Rome correspondent writes, express gratification at the election of Dr. Guido Baccelli as Honorary Fellow of the Harveian Society, recognising in the action of the society a tribute, not only to his therapeutic attainments, but to his high position and scholarly accomplishments.

THE annual report of the Devonshire Hospital and Buxton Bath Charity shows that 2656 in-patients were received during 1894. They included 2357 cases of a gouty or rheumatic character, 467 being complicated with some form of heart disease. The treatment demonstrated in the accustomed manner the remedial value of the Buxton mineral water. The financial position of the hospital is satisfactory, the receipts having exceeded the expenditure by £487.

THE POISON CASES AT WYLDE GREEN.—A series of cases of unexplained accidental poisoning on a large scale has occurred at the village of Wylde Green, near Sutton Coldfield, Warwickshire. On Saturday, Dec. 29th, an hotel proprietor, in accordance with usual custom at this time of the year, commenced the distribution of soup among the customers of the house and the poor of the district. In the course of the day many of those who had partaken of the soup were seized with sickness and diarrhœa, and by Jan. 2nd the number of sufferers amounted to at least 100. The meat used for preparing the soup is alleged to have been perfectly sound, and no irritant poison has been revealed by analysis. We are informed by the medical man in charge of many of the cases that a careful investigation is being made into the matter.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

CAMPBELL, DONALD, M.D., C.M.Glasg., has been appointed Medical Officer of Health for the Calne Rural and Urban Sanitary Authority.

COOKE, WM. C., L.R.C.P. Edin., L.M., M.R.C.S., has been reappointed Medical Officer of Health, Bognor.

DUNLOP, J. G., M.B., C.M.Glasg., has been reappointed Medical Officer of Health, Long Sutton.

EDWARDS, G. M., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., has been appointed House Physician to the North-Eastern Hospital for Children.

FERNIE, EDWARD, M.D.St. And., M.R.C.S., has been reappointed Medical Officer of Health for the parish of Swynnerton, of the Stone Union.

FLOYER, W. W., M.B. Lond., M.R.C.S., has been appointed Medical Officer for Thorpe, Surrey.

GRANT, ANDREW, M.B., Ch.M., Aberd., has been appointed Health Officer for the Oakleigh Borough, Victoria, Australia, vice W. H. Cutts.

HARDWICK, ARTHUR, M.D. Durh., D.P.H. Eng., has been reappointed Medical Officer of Health for the Newquay Urban Sanitary District.

INGLIS, DAVID, W., M.D., C.M. Glasg., has been appointed Medical Officer for the Hebburn Sanitary District of the South Shields Union, vice Mitchell.

IVENS, A. S., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Walton-on-the-Naze.

JONES, A., L.D.S., R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Addenbrooke Hospital, Cambridge.

LATOUCHE, A. D., L.R.C.P. Edin., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Soothill Nether Sanitary District.

LAW, T. BROUGH, M.B., C.M., has been appointed a District Medical Officer in the Colonial Medical Service, at Nicosia, Cyprus.

MACLENNAN, D. U., M.D., M.S. Edin., has been appointed Medical Officer of Health for the borough of Widnes.

PALMER, HORACE J., L.R.C.P., L.R.C.S. Edin., L.M., L.F.P. & S. Glasg., has been appointed Medical Officer of the Heath, Sutton-cum-Duckmanton, and Temple Normanton District.

PITT, CHAS. W., M.R.C.S., has been reappointed Medical Officer of Health for the Malmesbury Rural and Urban Sanitary Districts.

RHODES, W. A., L.D.S., R.C.S. Irel., has been reappointed Honorary Dental Surgeon to the Addenbrooke Hospital, Cambridge.

RODERICK, SYDNEY J., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Llanelly Urban Sanitary District and Port.

SHEARS, W., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Scarborough Hospital Dispensary.

UMNEY, WM. F., M.D. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Home and Infirmary for Sick Children, Sydenham, S.E.

WALDO, FRED. J., M.D. Camb., M.R.C.S., D.P.H. Eng., has been appointed Tutor in Public Health to St. Bartholomew's Hospital, Medical School.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

COUNTY ASYLUM, Prestwich, Manchester.—Pathologist. Salary £200 per annum, with furnished apartments, board, attendance, and washing.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, to reside and board in the hospital, unmarried. Salary £70.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary commencing at £100 per annum, increasing by £10 a year to £120 if services are satisfactory, with board, residence, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR WOMEN (the London School of Gynæcology), Soho-square, W.—Clinical Assistants.

PARISH OF CAMBERWELL.—Clinical Assistant for the Infirmary of the Parish at Havil-street, Camberwell, for six months. Honorarium not exceeding £20, will be given on the termination of that period, if duties satisfactorily performed. Board, lodging, and washing provided.

ROYAL HOSPITAL, Chelsea, S.W.—Dispenser. Remuneration 10s. a day, with unfurnished quarters, fuel, and light.

SHEFFIELD UNION.—Resident Assistant Medical Officer (single or widower) for the Workhouse and Children's Homes at Fir Vale, Pitsmoor. Salary £100 per annum, with apartments, rations, and the other usual allowances. Applications to the Clerk to the Guardians, Union Offices, Sheffield.

SOUTH-EASTERN FEVER HOSPITAL, Hatfield-street, New Cross, S.E.—Temporary Assistant Medical Officer. Salary £13 6s. 8d. per month, with board, lodging, attendance, and washing. Applications to the Medical Superintendent at the Hospital.

UNIVERSITY OF EDINBURGH.—Additional Examiners, for four years. Salary £75 per annum in each case, with an allowance of £10 per annum for travelling and other expenses in the case of an Additional Examiner not living in Edinburgh or the immediate neighbourhood. Applications to the Interim Secretary, University Court, University of Edinburgh.

Births, Marriages, and Deaths.

BIRTHS.

CRAIG.—On Jan. 5th, at Woodlee, Bridge of Allan, Stirlingshire, the wife of Staff-Surgeon William Maxwell Craig, R.N., H.M.S. *Rapid*, of a son.

ELLIOT.—On Jan. 5th, at Hawkwood, Chislehurst, the wife of Surgeon-Captain W. H. W. Elliot, 4th Punjab Infantry, of a daughter.

HUDSON.—On Jan. 4th, at Old Bank House, Millom, Cumberland, the wife of J. Wasdale Hudson, L.R.C.P., L.R.C.S., L.S.A., &c., of a son.

LYNN-THOMAS.—On Jan. 5th, at Greenlawn, Pen-y-Lan, Cardiff, the wife of Mr. J. Lynn-Thomas, F.R.C.S., of a daughter.

MOIR.—On Dec. 12th, 1894, at South-street, Halifax, Nova Scotia, the wife of Surgeon-Captain John Drew Moir, Army Medical Staff, of a son.

MORRICE.—On Jan. 4th, at St. Ann's Lodge, Salisbury, the wife of George Gavin Morrice, M.D., M.R.C.P., prematurely, of a daughter.

NUTTALL.—On Jan. 4th, at 41, Great Bolton-street, Blackburn, the wife of Frank Nuttall, L.R.C.P. & S. Edin., &c., of a son.

MARRIAGES.

FERRABY—ANSELL.—On Jan. 3rd, at St. Paul's Church, Grove-park, Chiswick, George Arthur Ferraby, L.R.C.P. Lond., M.R.C.S., of Birmingham, to Gertrude Somers, eldest daughter of William Henry Ansell, surgeon, of Market Rasen, Lincolnshire.

QUILLER—KING.—On Jan. 1st, at the Chapel Royal, Savoy, Charles Turner Quiller, M.R.C.S., of Clapham, to Caroline, widow of James Walton King.

DEATHS.

BLANDY.—On Jan. 6th, at Netherwood-road, Shepherd's-bush, Alfred Addison Blandy, M.D. (late of Brook-street, Grosvenor-square), aged 69.

OPPENHEIM.—On Jan. 7th, at his residence, Orsett-terrace, Hyde-park, Lewis Oppenheim, M.R.C.P. Edin., M.R.C.S. Eng., aged 62.

PAGET.—On Jan. 7th, at Park-square west, Regent's-park, Lydia, the wife of Sir James Paget, Bart., in her 80th year.

PHILPS.—On Jan. 6th, Philip George Philps of Russell-road, Kensington, M.R.C.S., aged 51, formerly of Queen's-road, Peckham.

SCHMIDT.—On Jan. 5th, at 150, Bethnal-green-road, Alfred Edwin Schmidt, L.R.C.P.E., L.R.C.S.E., L.S.A., aged 56.

SIMPSON.—On Jan. 6th, at the Royal Hospital, Chelsea, deeply regretted by all, Philip John Simpson, M.R.C.S. and L.S.A., in the fifty-sixth year of his age, son of the late George Simpson, F.R.C.S.

WRIGHT.—On Jan. 3rd, 1895, at King-street, Knutsford, William Charles Wright, M.R.C.S. Eng., L.R.C.P. Lond., aged 31 years. Of enteric fever.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (20, Hanover-square, W.).—7.30 P.M. Ordinary Meeting. 8 P.M. Dr. Porter (Stockport): Preventable Infantile Mortality, especially in connexion with Factory Labour. Discussion.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Paper:—Mr. C. S. Tomes: Some Points upon Amalgams. Casual Communications:—Mr. J. J. Andrews: On a very large Odontome (illustrated with lantern slides).—Mr. J. Mansbridge: A Method of draining the Antrum after Perforation.

SOCIETY OF ARTS.—8 P.M. Prof. Silvanus P. Thompson: The Arc Light. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir B. W. Richardson: Cycling and Heart Disease.—Dr. Hector Mackenzie: A case of Hysterical Deafness successfully treated, with some remarks on the Diagnosis and Treatment of this Affection.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. H. D. Rolleston: Diffuse Secondary Growth on Dura Mater.—Dr. W. Collier: Enlarged Spleen.—Mr. Cecil F. Beadles: Five Brains from Insane.—Dr. T. W. Carr: Serous Pachymeningitis from a Syphilitic Child.—Mr. H. Snow: Identity of Duct Cancer of Mamma with ordinary Carcinoma.—Mr. C. P. White: On the Cultivation of the Diphtheria Bacillus in Hydrocele Fluid. Card Specimens:—Dr. F. Parkes Weber: Boar's Tusk forming a Circle.—Mr. Cecil F. Beadles: Ruptured Heart.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Ordinary Meeting. Mr. Charles Harding: The Gale of Dec. 21st–22nd, 1894, over the British Isles. 8.15 P.M. Annual General Meeting. Report of Council; Election of Officers and Council; Address by the President (Mr. E. Inwards).

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Annual Meeting. Address by the President (Mr. A. D. Michael).

SOCIETY OF ARTS.—8 P.M. Prof. Vivian B. Lewes: Commercial Synthesis of Illuminating Hydrocarbons.

THURSDAY.—SOCIETY OF ARTS.—4.30 P.M. Capt. John Shakespear: The Lushais, and the Land they Live in.

HARVEIAN SOCIETY.—8 P.M. Annual General Meeting. President's Address; Smoking and Music.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Dr. Frederic Hewitt: Nitrous Oxide and Oxygen.

THE MATRONS' COUNCIL (Medical Society's Rooms, 11, Chandos-st., Cavendish-sq.).—8.30 P.M. Conference. Miss Mollett: Infirmary Matrons under the Poor-law. Discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (I.).

CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Mr. Lennox Browne: Diphtheria—the Elements of Prognosis and General Therapeusis.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. W. S. Lilly: Four English Humourists of the Nineteenth Century (I.).

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 A.M. Dr. Barratt: Introductory.

ROYAL INSTITUTION (Albemarle-street).—9 P.M. Prof. Dewar: Phosphorescence and Photographic Action at the Temperature of Boiling Liquid Air.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Anatomy of the Skin. 5 P.M. Dr. Morgan Dockrell: Syphilis.

ROYAL INSTITUTION.—3 P.M. Mr. Lewis F. Day: Stained Glass Windows and Painted Glass (I.).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 10th, 1895.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 4	29·88	N.E.	37	35	49	40	35	0·05	Overcast
,, 5	29·94	N.E.	39	37	44	40	36	...	Overcast
,, 6	29·91	N.	30	Frzn.	33	33	30	...	Foggy
,, 7	29·65	N.E.	33	,,	44	36	30	...	Overcast
,, 8	29·81	N.E.	36	35	48	39	33	...	Overcast
,, 9	29·86	N.E.	35	34	37	37	34	...	Overcast
,, 10	29·94	N.E.	28	Frzn.	38	32	27	...	Overcast

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

COVER TO THE LANCET.

THE Manager begs to announce that at the request of many advertisers, and to keep pace with the ever-increasing demand for "position" pages, it has been decided to issue a cover to THE LANCET, commencing with the present number. The cover is printed on the same kind of paper as the journal itself, and thus ensures uniformity of appearance with past issues. With this exception of the cover the journal remains exactly as it was before. The Proprietors cannot consent to the insertion of advertisements in the centre of the paper—a position which has frequently been applied for, but which is annoying to the general reader.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

QUERIES ON URINE-TESTING AND OTHER TOPICS.

To the Editors of THE LANCET.

SIRS,—I shall be greatly obliged if you will give me answers to the following questions. 1. What is a reliable and convenient method of applying the phenyl-hydrazine test for glucose in urine? 2. What complete book do you recommend on urine testing and urinary deposits? 3. What book would you recommend on diseases of advanced age, with their treatment? 4. What artificial light is the best for ophthalmoscopic and laryngoscopic purposes? Is the incandescent gas light quite suitable?

I am, Sirs, yours faithfully,

Dec. 30th, 1894. G. P.

*** 1. The mode of applying the phenyl-hydrazine test is thus described by Schwartz (Pharm. Zeit., xxxiii., p. 435): "The urine is first precipitated completely with lead acetate and filtered; the filtrate is mixed with a solution of phenyl-hydrazine and excess of potassium hydroxide (liquor potassæ), and then boiled for a minute. If sugar is

present a yellow colour appears, followed by a yellow precipitate on adding excess of acetic acid. The formation of this precipitate is more significant than the development of colour, for the reason that boiling with potassium hydroxide slightly darkens the colour of normal urine. The object of precipitating with lead acetate is to remove uric acid, which, when acetic acid is added, may form a precipitate which might be mistaken for that indicating sugar."—2. A Guide to the Examination of the Urine, by Dr. J. Wickham Legg (seventh edition, H. K. Lewis); or Clinical Diagnosis, by Dr. von Jaksch, translated by Cagney (Griffin) We review this week favourably a similar work by Dr. Purdy published in Philadelphia.—3. The influence of age as a factor in disease is discussed in most medical text-books. We know of no recent book treating disease from this point only, but may mention the work of Dr. MacLachlan—"Practical Treatise on the Diseases and Deformities of Advanced Life" (London, 1863).—4. The electric light has been found successful. The incandescent gaslight possesses the necessary properties, but we are not aware that it is used yet for laryngoscopic purposes.—ED. L.

J. C. (Hulme).—1. Most "chemicals"—like the heathen in their blindness—bow down to wood and stone, and, for that matter, to vulcanite, in the sense that wood, stone, and vulcanite are very resistent to chemical attack attended with practical results. 2. We fear we must await further long and patient research before we can report the discovery of "a chemical which prevents sulphur from doing its duty." Moreover, to what duty does our correspondent refer? Does he desire to frustrate the effects of sulphur when administered in the form of brimstone paste, in accordance with Mr. Squeers' classic system? Or does he desire to remove its natural properties, in which case it seems to us that it would cease to be sulphur?

Mr. C. D. Cassidy.—The minutes of the Dental Committee and of the Executive Committee on Dental Business are published with the minutes of the General Medical Council and of the Branch Councils, and can be obtained by application to the publishers, Messrs. Spottiswoode. The numbers for 1894 are not yet published.

Struggles.—We have made inquiries for our correspondent, whose letter is not as explicit as it might be. The regulations are different in Scotland and Ireland to those prevailing in England (including Wales) and the Colonies.

"MUCUS IN THE EVACUATIONS."

To the Editors of THE LANCET.

SIRS,—In reference to the letter of "A Reader" under the above heading in THE LANCET of Dec. 15th, 1894 (p. 1461), I beg to offer the opinion that your correspondent's patient is suffering from chronic catarrhal dysentery—a disease which I myself have unfortunately suffered from for some months. The proper method of treatment is by daily evacuation and disinfection, for which purposes one or more teaspoonfuls of castor oil should be taken each night, and a capsule containing ℥ x. of oil of turpentine every morning. If after a week or two ol. ricini is found too irritating, try small evacuant doses of sodium sulphate. The diet should consist principally of milk, with puddings, fish, eggs, fowl, rabbit, &c.; vegetables and butcher's meat should be avoided. I am indebted for the above most valuable suggestions to Dr. Ralfe, whose patient I have been for some time, and I am sure that if "A Reader" will persevere with the above method of treatment the same happy result will be attained in his case as in mine.

I am, Sirs, yours faithfully,

Ripley, Derby, Jan. 5th, 1895. F. C. WOOD, L.M. & S., L.S.A.

H. K.—Admission into the Army Medical Service is gained as the result of competitive examination. Under special conditions the admission may take place by nomination of the Secretary of State for War, such qualified candidates being proposed by the governing bodies of public schools of medicine in the United Kingdom or the Colonies. Candidates must, before being admitted to examination, possess the double qualification to practise médicine and surgery, and be registered under the Medical Act. They are also required to produce certificates of having acted as a medical clinical clerk for six months, as surgical dresser for another six months, and of having had not less than three months' instruction at an ophthalmic hospital or the ophthalmic department of a general hospital, including a course on errors of refraction. They must also furnish satisfactory certificates of moral character. Candidates must be between the ages of twenty-one and twenty-eight, in good mental and bodily health, and it should be stated whether they are of pure European descent. The candidate has also to be examined as to physical fitness by a Board of medical officers. These conditions being satisfied, he is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. An entrance fee of £1 is payable at the conclusion of the candidate's physical examination if pronounced to be fit. No candidate is allowed to compete on more than two occasions. The subjects of examination are divided into compulsory and voluntary. The former comprise anatomy and physiology, surgery, medicine, including therapeutics and the diseases of women and children, chemistry and pharmacy, and a practical knowledge of drugs. The eligibility of the candidate for admission into the service is determined by the result of this part of the examination. The voluntary subjects are French, German, comparative anatomy, zoology, natural philosophy, physical geography, and botany, with especial reference to materia medica. After having passed this examination the successful candidate is sent to the Army Medical School at Netley as "surgeon on probation," receiving a daily pay of 8*s.* and certain allowances, to go through a four months' course of instruction in the special duties required of him in the service.

Nemo Nihil.—We cannot insert the letter of our correspondent. It is a long indictment of his brethren, without a word of qualification or commendation. No class of the profession escapes—consultants, general practitioners, principals, all seem alike bad. Parsimony in our prosperous members; unprincipled and infamous use of professional position in ordinary practice; the meanest treatment of useful assistants—are the kind of qualities which he finds in medical practitioners. It is as if he had applied a microscope for the detection of every flaw and was absolutely blind to every virtue. We can be no parties to such one-sided judgment. That there are such persons may be admitted, as there are in every profession and calling. That they represent the profession we deny, and that such a wholesale accusation of the brethren in the name of Christianity is a good sermon for the opening year we altogether doubt.

Mr. G. H. Gabb.—We fail to see any serious or important difference between the two results of analysis. As to the analysis we published being a "chemical and physical impossibility," that is absurd, unless the same remark applies also to hundreds of analyses of milk published in well-known works. The amount of non-fatty solids was 9·26 per cent., but we have not stated how much of this was proteid and how much sugar.

"ON THE TREATMENT OF GLEET BY THE URETHROSCOPE."

To the Editors of THE LANCET.

SIRS,—I noticed in this club, the members of which are chiefly young men, a paper called *The Medical Week* in the library to-night. The paper is not taken in here, nor have I ever seen it here before. An article with the above title was marked on the cover in blue pencil.

I am, Sirs, yours faithfully,

Isthmian Club, Piccadilly, Jan. 6th, 1895. M.D.

Thirteenth Wrangler.—There are illogical duchesses outside "Alice in Wonderland." We read in the *Lady* that their Graces of Hamilton and Sutherland, having met with accidents in the hunting field, have placed themselves under a bone-setter. There must be something unreasonably fascinating to the lay mind in being treated by the irregular practitioner, for no one who think—no one, in fact, who is logical—can seriously hold that the uneducated man is likely to know more than the educated.

Congratulations.—We are much obliged to our correspondent for his communication, but it is contrary to our practice to reply to articles that have appeared in the pages of a contemporary. Reference has been made to the subject of the appointment in the present number of THE LANCET.

Dr. Gairdner (Crieff, N.B.).—The specimen which our correspondent enclosed in his letter was submitted to our analyst, who reports that he found plenty of iron in it, but no distinct evidence of the presence of other metals could be obtained.

F. P. M.—Our correspondent might refer to the Army Medical Regulations on the subject of the physical examination of recruits, and to Dr. J. E. Pollock's "Medical Handbook of Life Assurance."

During the week marked copies of the following newspapers have been received:—*Levant Herald, Staffordshire Post, Glasgow Evening News, Lincolnshire Echo, City Press, Abingdon Herald, Newcastle Chronicle, Liverpool Courier, Birmingham Gazette, Morning Leader, Isle of Wight Observer, Brighton Argus, Warwickshire Times, Scotsman, Eastern Daily Press, Walsall Observer, Manchester Guardian, Sussex Daily News, Leicester Post, Northern Whig, Liverpool Daily Post, Science Shiftings, Leeds Mercury, Reynolds, Cork Examiner, Bristol Mercury, Mark Lane Express, Lloyds, Yorkshire Post, Courrier de la Presse (Paris), Times of India, Morecambe Times, Pioneer Mail, Coventry Mercury, Senate, Builder, Sanitary Record, Cork Constitution, Architect, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Cape Times, Public Health, Reading Mercury, Hertfordshire Mercury, Oxford Times, Surrey Advertiser, Local Government Journal, Australian Medical Journal, Boston Independent, West Middlesex Standard, Aglaria, Royal Cornwall Gazette, Bambury Guardian, Pembroke Gazette, Burton Chronicle, Nottingham Daily Express, Public Opinion, Gravesend Standard, Madras Times, Oban Times, East Sussex News, Blackpool Gazette, Torquay Times, Cambridge Express, Essex Telegraph, Devon and Exeter Daily Gazette, Walton Gazette, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. F. H. Alderson, Lond.; Mr. R. B. Anderson, Lond.; An Englishman; Alpha, Lond.

B.—Dr. W. W. Baldwin, Florence, Italy; Dr. J. Brown, Glasgow; Dr. E. A. Bannatyne, Bath; Dr. F. H. Bromhead, Twickenham; Mr. L. A. Bidwell, Lond.; Mr. A. St. Clair Buxton, Lond.; Mr. G. R. Butler, Lond.; Mr. G. G. Barrett, Lond.; Mr. W. Bernard, Londonderry; Mr. W. Brooks, Lond.; Mons. O. Berthier, Paris; Mr. T. B. Browne, Lond.; Mr. E. S. Bishop, Manchester; Mr. G. A. H. Barton, Morchard Bishop; Mr. F. N. W. Brown, Toronto; Mr. S. H. Benson, Lond.; Mr. C. Birchall, Liverpool; Messrs. Black and Co., Lond.; Messrs. J. Beal and Son, Brighton; Messrs. Blondeau et Cie., Lond.; Messrs. Bryce and Rumpff, Lond.; Blackburn and East Lancs. Infirmary, Sec. of; Birmingham Gen. Hosp., Sec. of; Bampton, Ilkley.

C.—Dr. J. J. Cranny, Dublin; Dr. J. J. Carmody, Lond.; Dr. H. M. Cambridge, Illinois, U.S.A.; Dr. R. Crear, Cromarty, N.B.; Dr. L. J. G. Carré, Lond.; Mr. Mayo Collier, Lond.; Mr. J. Carroll, Hulme; Mr. D. J. Carrol, Clonmel; Mr. A. H. Cox, Brighton; Mr. W. S. Crawford, Liverpool; Caledonian Insurance Co., Lond., Sec. of.

D.—Dr. W. Donovan, Birmingham; Mr. W. F. Dale, Welling; Messrs. Duncan, Flockhart, and Co., Edinburgh; Messrs. Down Bros., Lond.; Messrs. S. Deacon and Co., Lond.; Messrs. Davy, Yates, and Hicks, Lond.

E.—Dr. W. Edmunds, Lond.; Dr. J. R. Earle, Bridgwater; Messrs. Evans, Sons and Co., Lond.; East London Hosp. for Children and Disp. for Women, Sec. of; Exalgine, Lond.

F.—Dr. A. Flint, Westgate-on-Sea; Mr. W. Fletcher, Lond.; Messrs. Foster, Brown, and Co., Montreal; Fine Art Soc., Lond., Sec. of; F. P. M.

G.—Dr. G. A. Gibson, Edinburgh; Mr. G. H. Gaff, Lond.; Sr. Salvatore Di Giorgi, Mazzara del Vallo, Italy; Messrs. H. Gaze and Sons, Lond.; Messrs. Goddard Bros., Peterborough; Messrs. Greaves and Taylor, Bradford; Guest Hosp., Dudley, Sec. of.

H.—Dr. J. A. Hutton, Scarboro'; Dr. J. Hamilton, Glasgow; Dr. J. Hawkes, Yardley Hastings; Mr. A. Haviland, Buxton; Mr. O. L. Holst, Eastbourne; Mr. M. Hoff, Lond.; Mr. M. Houghton, Cardiff; Mr. J. Heywood, Manchester; Mr. T. Holmes, Lond.; Mrs. Hislop, Prestonpans; Messrs. Haasenstein and Vogler, Geneva; Messrs. Horner and Sons, Lond.; Messrs. Hooper and Batty, Lond.; Hart's Advertisement Offices, Lond.

I.—Dr. W. H. Iddon, Southport; Mrs. Irvine, Lond.; International News Co., Lond.; Incandescent Gas Light Co., Lond.

J.—Dr. W. L. Jones, Merthyr Tydfil.

K.—Mr. A. Kelson, Redhill; Mr. R. C. B. Kerin, Lond.; Messrs. Kilner Bros., Lond.; Kreochyle Co., Lond.

L.—Dr. T. W. Latta, Trenton, N.J., U.S.A.; Dr. F. M. Linquist, New York; Dr. Fletcher Little, Lond.; Mr. H. Lane, Bath; Mr. T. Laffan, Cashel; Mr. H. K. Lewis, Lond.; Mr. E. V. Lewis, Lond.; Mr. G. Lewis, Lond.

M.—Dr. C. F. Marshall, Lond.; Mr. M. Morris, Lond.; Mr. H. B. Mallam, Woburn Sands; Messrs. W. Marshall and Sons, Great Grimsby; Messrs. C. Mitchell and Co., Lond.; J. Milne's Antiseptic Dressing Factory, Lond.; Manchester County Asylum, Supt. of; Maltine Co., Lond.; M., Malpas; M.D.; Media, Lond.; Midwives' Inst. and Trained Nurses' Club, L. Sec. of.

N.—N. E. R., Lond.

O.—Dr. G. Ogilvie, Lond.; Prof. Ogston, Aberd.; *Our Dogs*, Editor of, Lond.; Osteotome, Lond.; Opening, Lond.; Obstetrics, Southend.

P.—Dr. F. A. Purcell, Lond.; Mr. E. A. Piggott, Clare.

Q.—*Quiver*, Editor of, Lond.

R.—Dep.-Ins.-Gen. W. Reid, Gosport; Mr. C. Read, P. & O. s.s. *Rome*; Mr. J. Richardson, Lond.; Mr. H. M. Riley, Leicester; Mr. W. H. Reed, New Scaham; Mr. G. K. Richards, Rome; Mr. H. Rowlatt, Rome; Messrs. Robertson and Scott, Edinburgh; Messrs. Richardson Bros. and Co., Liverpool; Messrs. Reynolds and Branson, Leeds; Roy. Victoria Hosp., Bournemouth, Sec. of.

S.—Dr. A. E. Sansom, Lond.; Dr. W. C. Sharpe, Matlock; Dr. F. J. Smith, Lond.; Mr. L. Stephens, Emsworth; Mr. C. H. Southall, Leeds; Mr. H. Smith, Northampton; Mr. G. Slater, Sheffield; Messrs. Spurrier and Co., Birmingham; Messrs. Street and Co., Lond.; Messrs. J. Swain and Son, Lond; S. H., Lond.

T.—Dr. Bell Taylor, Nottingham; Dr. P. Taenzer, Bremen; Mr. L. Tallerman, Lond.; Mr. W. Toogood, Lond.

V.—Dr. Van Niessen, Wiesbaden.

W.—Dr. F. J. Waldo, Lond.; Mr. W. E. Wynter, Lond.; Mr. C. H. Wheatland, Melbourne; Mr. G. Williams, Oxford; Mr. A. H. Ward, Lond.; Messrs W. Wood and Co., New York; Messrs. White, Druce, and Brown, Lond.; West End Hosp. for Diseases of the Nervous System, Lond., Sec. of; Wolverhampton Gen. Hosp., Sec. of; Williams, Talgarth.

Letters, each with enclosure, are also acknowledged from—

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